

# THE MACDONALD COLLEGE MAGAZINE.

“Mastery for Service.”

Published by the Students.

---

Vol. III.

APRIL-MAY, 1913.

No. 4.

---

## The Editorial Staff of the Magazine:

**Editor-in-Chief**—B. T. Reed, '14.  
**Associate Editor**—H. J. M. Fiske, '14.  
**Business Manager**—T. F. Ritchie, '14.  
**Advertising Manager**—V. B. Durling, '14.

### Assistant Editors :—

School for Teachers—Miss M. Mills.  
School of Household Science—Miss E. Ayre.

### Assistant Business Managers :—

Faculty of Agriculture—Q. MacLaren, '15.  
School for Teachers—Miss M. Goodchild.  
School of Household Science—

### Sub-Editors :—

For Agronomy—W. Newton, '14.  
For Horticulture—J. R. Macfarlane, '14.  
For Live Stock and Dairying—W. L. Macfarlane, '14.  
For Poultry—A. G. Taylor, '15.

### Social :—

Faculty of Agriculture—O. Schafheitlin, '14.  
School for Teachers—Miss V. Joss.  
School for Household Science—Miss L. deVilliers.

### Athletics :—

Men's Residence—G. Muir, '14.  
Women's Residence—Miss B. Reynolds.

### Alumni :—

Faculty of Agriculture—R. E. Husk, '14.  
School for Teachers—Miss K. Porter.  
School for Household Science—Miss M. Andrews.

### Humorists :—

Chas. Russell, '16, Miss M. McPherson.

### Photographers :—

H. R. Baily, '15, Miss Norris.

### Artists :—

Miss H. Buzzell, Miss L. Kilburn.

### Proof Readers :—

H. D. Mitchell, '16, J. McCormick, '16.

**Faculty**—Prof. L. S. Klinck.

## EDITORIAL

This issue completes the third volume of the Macdonald College Magazine. In the first number the purpose of the publication is said to be “the recording of the most interesting and important features of College life, but it aims also at providing literary and scientific articles on subjects connected with the various departments of research and study at the College, by writers well qualified to deal with them.” While the present staff is in hearty accord with this

conception of the *raison d'être* of the Magazine, yet it is the belief of many that, to be of greatest value to the students, it should contain articles largely of their own production. With this idea in mind we have attempted to make this last issue in Volume III. essentially a “Student's Number.”

\* \* \*

For the majority of the students, the Spring of 1913 marks the completion of their College course. The question

which comes up at this point is: Have I made the best of the opportunities which have been afforded me? Happy, indeed, is the one who can truthfully answer in the affirmative; but be that as it may, there can be no doubt that every one who has passed a year at Macdonald College will go out better equipped for a life of service in the advancement of our country. It was a high ideal to set up when the motto "Mastery for Service" was selected to appear on the College crest, but a more appropriate could not have been found for an institution of which the purpose is "to increase productiveness, with improvement of products in the field and in the industries of the farm and town, to promote greater comfort and enjoyment in the home, a better-taught school for the children, and a nobler sense of the responsibilities of life." Let every student who goes out from Macdonald this year keep in mind the added responsibility which rests upon him or her for having been here.

\* \* \*

The Alumni of Macdonald must now number in the vicinity of two thousand. That not over two per cent. of this number are subscribers to their College Magazine does not say much for the interest which they maintain in their Alma Mater. We do not believe, however, that it is because of this that so few of our alumni support us. It is more probable that it is simply neglect. Renew your youth and your memories of the best days of your life by renewing your subscription to the Magazine.

We are pleased to publish this month the list of addresses of the members of our "Agricultural Alumni Association." This organization will do much to keep alive the spirit of good will which should bind our graduates and our students in common loyalty to their Alma Mater.

\* \* \*

It is a regrettable fact that few of the graduates in Agriculture have, as yet, taken up practical farming in the Province of Quebec. Probably the real trouble is that such a pitifully small number of boys from the province have been, and are, taking courses here. Of our numbers this year just fifty per cent. are Quebec boys, and this in spite of the free tuition in the first two years and of the Government bursaries of \$9 per month. The cost of a College course to Quebec boys is thus reduced to a minimum. Many otherwise progressive farmers regard the College as a place where, on unlimited means, all kinds of theories are tried out and taught to the students, with the result that little or no practical knowledge is gained. While this is obviously a wrong idea, we wish to urge the great advantages a year or more in college has in regard to developing the social side of a country boy's life. To many this is perhaps the biggest factor; they regard the associations of College life as of inestimable value. It is this lack of knowledge of how to live and co-operate with one's neighbours that is one of the great impediments of the advance of rural life.

In this connection, we think that a course in rural sociology would be a valuable addition to the present curriculum. A beginning was made in Mr. Good's series of ten lectures on Rural Economics, and the close attention displayed by the students, in spite of the fact that half of the lectures were given to out of lecture hours, is indicative of their interest in the subject. We need more College-trained farmers in the rural communities of this Province.

\* \* \*

The students in the third and fourth years in Agriculture wish to express their appreciation of Mr. Good's series of lectures and to thank Principal Harrison for having made them possible.

\* \* \*



Dean Sinclair's proposal for increasing the supply of trained teachers and interest in rural schools, by making possible a course in teaching leading to a diploma to the students in Agriculture and Household Science, is filled with great possibilities if accepted by the students concerned with the enthusiasm it justifies. The teachers and curriculum of country schools have too long held up before the children the ideals of city life. We need to educate the country children to an appreciation of the rural life if we wish to hold them on the farm, and this can best be done through interesting them in nature. No one should be better fitted to do this than

the graduates in Agriculture or Domestic Science of Macdonald College. Dean Sinclair's plan, if carried out, will add another force to the efforts which are beginning to be made to stem the tide of the country population citywards.

\* \* \*

As an expression of the deep sorrow which we feel on the death of our much-beloved Professor of Nature Study, the following message has been sent to his bereaved family:

"The students of Macdonald College, through the Students' Council, extend their sincerest regrets and sympathy to Mrs. Brittain and family in their recent sad bereavement."

---

## Sawyer-Massey Offer Prize.



ON the inside of the front cover are the details of a competition for a prize of \$25, offered by the Sawyer-Massey Company, Ltd., of Hamilton, Ontario. The subject is one of great interest to farmers in general, and particularly to those who are making a scientific study of practical and up-to-date methods. The growing of clover has already been investigated by the Canadian Government, and with such satisfactory results that they strongly urge its wider practice, and even offer material assistance in the development of clover as a commercial crop.

The value of clover for rejuvenating the soil and as pasturage is well recognized, but thus far its possibilities have been but little exploited. Clover, as a seed crop, is almost unknown, yet it can be made to yield big profits. Unlike any other crop, it enriches the land and yields a harvest at the same time. The

ways of utilizing it are many, but lack of appreciation of its full value has left it in a position of such minor importance that the average farmer scarcely gives it a thought.

Graduates of a college such as Macdonald should be awake to all the possibilities of their chosen calling. We should be the recognized leaders in the agriculture of the future, and can afford to overlook no opportunity for fitting ourselves to appreciate its broadest phases.

This competition should bring forth the best talent in Macdonald. Every branch of agriculture can find something of vital interest in the subject. We have wide resources from which to draw our material. The prize is well worth winning, and for those who do not win the prize, the knowledge gained in striving for it will be ample recompense. The ball has been started rolling, and now let us see how far we can make it go.

## THE LATE DR. JOHN BRITTAIN.

---

On Monday, March 17th, after an illness of over four months, Dr. John Brittain, Professor of Nature Study, passed away. By his death Macdonald College loses one of the most gifted members of her staff, and one who was universally beloved.

Dr. Brittain was born on a farm near Sussex, N.B., November 22nd, 1849. Unlike most other boys of the same age he did not have the privilege of attending school, being obliged to work on the farm as soon as he was able. However, when he was thirteen years old his grandfather took him to Holton, Maine, where he remained three years and where he had the opportunity of going to school. Upon his return at the age of sixteen he decided to teach school. It is interesting to note that from this time until his death—a period of 47 years—he was engaged in active teaching.

His first school of which we have a record was one at Ratter's Corner, near his home, which he conducted for more than a year (1866). As he did not have a teacher's license, he decided to attend for three or four months, what is now known as the Old Normal School in the city of St. John and secure a Second Class license. This examination was passed successfully and the coveted license obtained in January, 1868.

After this he taught half a year at Apohaqui, four years at Upham, King's Co., and four years at St. Martin's. It was while he was at the last mentioned place that he secured his First Class Teacher's license, dated May 1st, 1874, which permitted him to take charge of larger and better schools in any part of the province whenever opportunity might offer. From St. Martin's Dr. Brittain went to Petitcodiac, where he had charge of one of the best Superior schools of the province for eleven years. His success as a teacher in this school attracted the attention of the principal of the Normal School and of Dr. Crockett, then Chief Superintendent of Education, and he was induced to go to the Normal School in Fredericton, as Instructor of Natural Science. During the fourteen years he was at the Normal School he maintained his already high reputation as a teacher, and as a botanist and naturalist. His knowledge of the flora of New Brunswick was profound, and he was recognized as the chief authority on the plants of the province. During the summer vacations he traversed the entire province and made large collections of plants and birds. His private collection is now in the museum of the provincial Normal School. In recognition of his services on behalf of education and science, the University of New Brunswick conferred on him in 1905 the degree of Doctor of Science.

Dr. Brittain was one of the earliest advocates in Canada of the introduction of Nature Study into the public schools. He recognized the importance of putting the boys and girls, especially those of rural districts, into sympathetic relationship with the things of their environment. He believed that the farm and its surroundings would become more interesting and have a deeper meaning for the young. Country life would become more satisfying because the things of the country would become part of their lives. Besides, the information gained in their studies of Nature would become of service to them when they left school to take up the more serious operation of farming.

For such an ideal Dr. Brittain worked with that quiet intensiveness which was characteristic of the man. He had the satisfaction of seeing Nature Study introduced into the public schools of his native province and into many of the other provinces as well.

While at the N.B. Normal School he published his "Nature Lessons for the Common School," one of the best known text-books in the schools. After coming to Macdonald College he published his "Elementary Agriculture and Nature Study," which has been adopted as a text-book in several of the provinces.

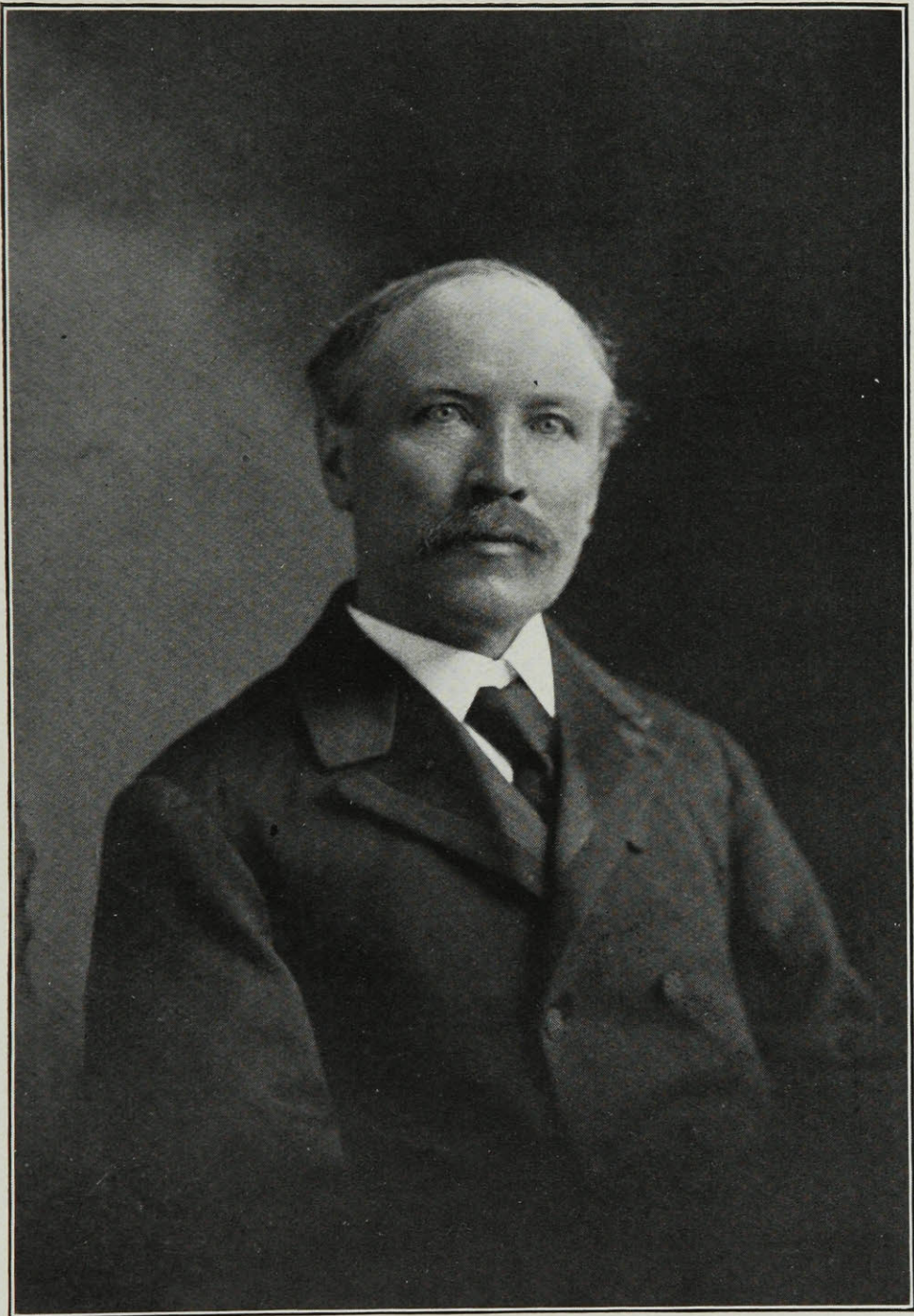
On account of his keen interest in Nature Study Dr. Brittain was selected by Dr. Robertson in 1902 to take special charge of the school-garden work which Sir William Macdonald was anxious to introduce into the schools of the eastern provinces in connection with the Nature Study movement. He attended special classes at the universities of Chicago, Cornell, Columbia and Clark during the college year 1902-03, and on his return was Supervisor of School Gardens in Carleton and Victoria counties for four years. In addition he acted as Professor of Chemistry in the U. N. B. Then he came to Macdonald College in 1907 where he labored with the greatest acceptance up to the time of his last illness.

As a teacher Dr. Brittain possessed qualifications of an exceptionally high order. He was a master of the Socratic method and demanded complete answers to his questions. He was patient, firm, tactful and inspiring. At Macdonald College as at the Normal School at Fredericton his influence on the teachers-in-training was very marked, and thousands of young people in two provinces are now being favorably influenced indirectly by him through the teachers who attended his classes. Well might we say of him as was said of another: "*Si monumentum requiris, circumspice.*" He made teaching his life work, because he loved his work and because he believed the teaching profession was one of the grandest that could engage the attention of any man or woman. His quiet, gentle, unassuming manner endeared him to all. He was always happy when he had a class of young persons about him.

The late Dr. Brittain was married in 1871 to Miss Charlotte Bonney. The family consists of eight—three sons and five daughters—of whom William, Ethel (Mrs. Rutter), Mary, and Bessie (Mrs. Robinson) are graduates of Macdonald College. To Mrs. Brittain and the family, the *Magazine* tenders its sincerest sympathy in the loss of a kind, devoted husband and father.

W.L.





*THE LATE DR. BRITTAIN*

“ His life was gentle; and the elements so mixed in him that Nature might stand up  
and say to all the world, ‘ This was a man.’ ”



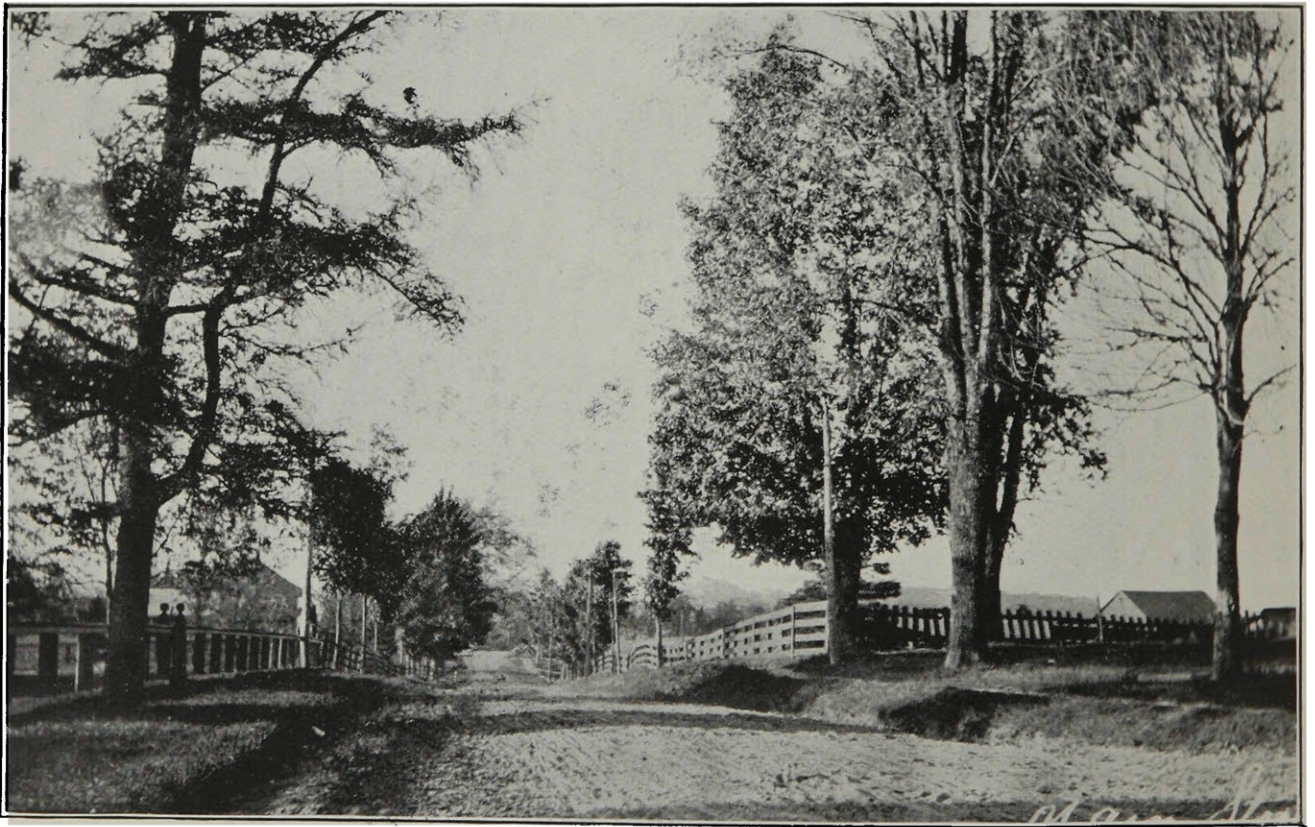
## Retrospect and Prospect.

The concluding lecture of a series on Rural Economics, delivered by W. C. Good, Esq., B.A., Brantford, Ont., to the Third and Fourth Year Students in Agriculture.—EDITOR.



URING our studies of Rural Life we have come to the conclusion that the duty of maintaining the vigor and quality of the rural population is imperative, if we are to prevent national and social decay. This conclusion has been reached by a comparison

rapidly for over twenty years, and the future is pregnant with possibilities which are a menace to our civilization. As rational beings, who have the determination of their own environment, it is not wise for us to let matters drift; rather is it incumbent upon us to meet the situation courageously, and, by prompt



*A Country Road.*

of the typical characteristics of city and country life, with their reflex influence upon character; and it is confirmed by the general admission that the rural districts are the seed-bed of the whole population. We have also seen that in Eastern Canada evidences are not wanting of a serious decadence in rural life. Depopulation has been going on very

action in the right direction, avert the danger before our downward acceleration becomes too great to overcome. I have, therefore, made several specific recommendations which, it seems to me, will do much to remedy the evils to which I have referred. Most of these recommendations have to do with ways and means of securing a more equitable

distribution of wealth, and of maintaining a genuine democracy; and I propose, this evening, to test the soundness of those recommendations by a brief review and interpretation of history, so as to discover, if possible, the law of human progress, and the causes which have operated in the growth, stagnation, and decay of the civilizations of the past.

Leaving out of consideration all speculation as to the origin of the human race we may confidently say that man has always been, so far back as we can obtain any knowledge of him, a reasoning, tool-using animal, and therefore capable of progress. But the degree in which the essentially human faculty has been used varies greatly. There is an enormous difference between the Indian's canoe and the modern steamship, between the arrow and the rifle, between the totem pole and the Grecian marble, between savage knowledge and modern science, between the Hottentot and the cultured man of to-day.

These differences cannot be ascribed to differences of original capacity. Our own ancestors were savages long after the Chinese had developed a very elaborate civilization; and the inhabitants of some of the Pacific Islands, after centuries of internecine warfare and cannibalism, have, within a single generation, advanced to a stage of civilization almost equal to our own. Children of civilized parents when cut off from civilization grow up to be savages; while the children of savages reared in the atmosphere of civilization are so moulded by that environment that one can recognize but few mental traces of their physical ancestry. I do not mean to say that the effect of heredity is nil; my contention is that, so far as civilization goes, the influence of environment is well-nigh overwhelming.

A current theory of social evolution holds that the modern man is a type slowly evolved from the primitive man, by a process of gradual selection. To us, who live in an advancing civilization, this theory may be plausible; it is so to everyone whose vision does not extend beyond the history of the growth of a single civilization. But it cannot account for the fixed or petrified civilizations of Asia. The Hindoos and the Chinese had great cities, highly organized governments, polished manners, literatures and philosophies when our ancestors were wandering barbarians. Nor does it render intelligible the entire disappearance of a half-dozen ancient civilizations. The great city of Nineveh has been buried beneath the dust of ages, and we are only now by excavations learning something of the greatness and splendor of the old Assyrian Empire. The hanging gardens of Babylon were probably the equal of anything of like nature that the world has ever seen. But they disappeared, with the entire civilization of which they were emblems; and the site of ancient Babylon became the abode of jackals and beasts of prey. And what shall be said of the civilization of ancient Egypt! Wonderful as are the achievements of modern engineering, they cannot compare with the pyramids, obelisks and temples of that ancient country.

What shall we say therefore as to the growth, stagnation, and dissolution of those civilizations of the past? Why did they not gradually improve? Why was it necessary that even Rome, which comes within easy vision of our own day, should be ransacked and overrun by the barbarians of the north, who, in their turn, have developed the dominant civilization of to-day? The earth is the tomb of dead empires, as well as of dead men. Over and over again art has

declined, learning sunk, power waned, population become sparse, until there remained but a squalid remnant of the glory that had been.

Can this be explained on the theory of gradual development? Or shall we be forced to assume that nations, like individuals, have a fixed period of life, and that they die a natural death? If so then we must contemplate the death of our own civilization with as much assurance as we look forward to the end of our lives as individuals.

But it is not necessary to make such an assumption. Recognizing the fact that differences of individual capacity cannot explain the differences between civilizations, we may safely infer that civilization is essentially a social product, and that the civilized man and woman are also products of the social environment in which they have been brought up. Each society weaves for itself a complicated web of knowledge, belief, customs, language, tastes, institutions and laws. Into this web the individual is received at birth and continues till death; and, as his mind unfolds, it takes the stamp of its environment. In this way also skill is transmitted, knowledge stored up, and, through spoken and written language, the achievements of one generation made the common stock and the stepping stone for the next generation. The arts, the sciences, and the inventions advance as discoveries by the individual are made common property and hence made the starting point for further advances.

Therefore, as people come together and build up the social organism through spontaneous co-operation, progress in civilization becomes possible. Alone man has all he can do to satisfy the needs of his animal nature, but, in co-operation with his fellows, the satisfaction of his higher nature becomes possible through

the great increase in the productive powers of society.

Let me read to you what I think is a beautiful description of the outworkings of the higher man.

"Out upon nature, in upon himself, back through the mists that enshroud the past, forward into the darkness that overhangs the future, turns the restless desire that arises when the animal wants slumber in satisfaction. Beneath things he seeks the law; he would know how the globe was forged, and the stars were hung, and trace to their sources the springs of life. And then, as the man develops his nobler nature, there arises the desire higher yet—the passion of passions, the hope of hopes—the desire that he, even he, may somehow aid in making life better and brighter, in destroying want and sin, sorrow and shame. He masters and curbs the animal; he turns his back upon the feast and renounces the place of power; he leaves it to others to accumulate wealth, to gratify pleasant tastes, to bask themselves in the warm sunshine of the brief day. He works for those he never saw and for those he never can see; for a fame or maybe but for a scant justice that can only come long after the clods have rattled upon his coffin lid. He toils in the advance, where it is cold and there is but little cheer from men, and the stones are sharp and the brambles thick. Amid the scoffs of the present and the sneers that stab like knives, he builds for the future; he cuts the trail that progressive humanity may hereafter broaden into a highroad. Into higher, grander spheres desire mounts and beckons, and a star that rises in the east leads him on. Lo! the pulses of the man throb with the yearnings of the god he would aid in the process of the suns!"

So civilization becomes possible through the economies of associated



effort. In the process population becomes fixed and relatively dense, society becomes more complex, occupations and functions are specialized and individuals rendered more dependent upon one another. Knowledge becomes so vast that it is divided into departments, in each of which the human mind is taxed to the limit.

But in this process of civilization, as there is a constant differentiation of function, there is also a constant tendency towards inequality. The setting apart of a governing class in whom resides the collective power of the community makes it possible for that class to abuse the power which has been conferred upon them. So, too, in the separation of ecclesiastical or military classes, we have the same dangers apparent.

The force of habit, too, retards the adjustment of the social web of custom and law to new conditions; thus the natural leader of a patriarchal tribe becomes ultimately an absolute monarch, at the foot of whose throne a whole nation grovels in fear. This we have seen in the oriental civilizations that have passed away, and, to a certain extent, in some of the more backward civilizations of recent times.

In tracing the growth of the civilizations of the past, therefore, we see the principle of the division of labor resulting generally in the separation of societies into two classes, the rulers and the ruled. Hence arise the monarchies, aristocracies, oligarchies and dictatorships that have so frequently marked the beginning of decline. Power is distributed among, and exercised by, the few, for their own glorification, and when this point is reached the development of civilization is arrested and stagnation ensues. The history of civilization makes it quite clear that,

unless there is some way of securing equality with associated effort, some way of preventing power from getting into the hands of the few, some controlling force making for equity, then progress halts and ultimately decay sets in.

The earliest civilizations of which we have any record arose, and very naturally arose, in those rich alluvial plains of the Euphrates and the Nile, where Nature was lavish with her gifts. We know practically nothing of the origin of these civilizations. The earliest records extant, so far as I know, show that the division of labor had divided society into hereditary castes,—the governing caste, the priestly caste, and many castes of artisans and laborers. The productive power of society was great, but, instead of being exercised to ameliorate the condition of the masses, it was devoted to the building of temples, palaces and pyramids. You all remember the story of the Hebrew Slaves in Egypt; of the cruel means the ruling class took to prevent them from increasing too fast; the story of Moses and the subsequent revolt of the slaves. You remember, too, the glories of Babylon and Nineveh, and how Solomon attempted to rival them by building a magnificent temple in Jerusalem; how the burden of taxation which this involved made the Hebrews rebel under Solomon's son Rehoboam, and the subsequent history of that great but ill-fated people.

These civilizations perished from internal decay and weakness, due to inequality, due to the fact that the labor of the masses was devoted to ministering to the pride and luxury of their rulers. Babylon in all its glory was rotten within when the sword of the avenging Persian descended upon it, and fulfilled the words of the Hebrew seer in making its very site a scene of

desolation and the habitation of wild beasts. So the Persian supplanted the Babylonian, became corrupted by riches and inequality, and perished in conflict with the Greek, who, in turn, fell before the Roman. The Roman civilization, springing from the association of independent husbandmen and free citizens of Italy, gathered strength by association with equality, and extended its power over practically all the then known world. But conquest brought tribute from afar, great estates grew up in Italy, luxury prevailed in her cities, government became despotism; in a word, inequality produced decay—mental, moral, political and material. The Rome of the Neros is a terrible example of the degeneration of a free republic, and it is no wonder that the sword of the northern invader penetrated the heart of the Empire like a knife penetrates a piece of rotten wood.

Modern civilization arose upon the wreck of the Roman Empire. Its superiority, I think, is due mainly to the influence of the Christian ideal, which was never completely hidden even in the darkest of the middle ages. The Church was, both in its claims and in its organization, a witness for association with equality; and in her midst was preserved the spirit and knowledge that finally rent her organization throughout a great part of Europe. The Christian ideal of brotherhood under a common Father has been the germ of all those advances in individual liberty and democracy which have characterized the growth of our own civilization, through which indeed material progress has largely come.

The law of human progress is therefore but the moral law, comprehension of which sufficiently accounts for the fulfilment of the Hebrew seers' predictions concerning the fate of the ancient civilizations of the near East. The

acknowledgment of equality of right between man and man and the establishment of justice will maintain a civilization in health and vigor, because it will permit associated effort without permitting that inequality which has been the prime cause of decay in the civilizations of the past. All history indeed teaches that the seeking first of the Kingdom of God and His righteousness will bring all material blessings in its train, whereas the worship of mammon leads to misery, poverty and extinction. Civilization can be saved only as it is permeated by altruism.

But, it will be said, modern civilization is permeated with altruism. Human slavery has been abolished, and democracy is rapidly extending, the people rule themselves; how then can they be enslaved by a ruling class? It is absurd to suggest any decline.

I grant that a good case may be made out to support that view. It is, however, quite evident that there have been periods of decline in the past, whose beginnings would largely escape recognition. Who, for instance, living in the Augustan age, when Rome was at the height of her splendor, would have predicted imperial disaster? It is also evident that a democratic government is no absolute guarantee against retrogression. Democracies have been virtually enslaved in the past; and it is as easy to lose political liberty as to gain it—perhaps easier. All that we can with any certainty say is that the unequal distribution of wealth and power, with its inevitable consequences, the corruption or degradation of both rich and poor, has been the death of every civilization in the past; and I see no reason for assuming that the same causes, if allowed to operate unchecked, will not bring about the same result in our present civilization.



In Canada, in fact, we have never yet had a real democracy. We elect our rulers for a term of years, during which term they have practically absolute power. We have, in fact, no constitutional means of preventing unpopular legislation from being enacted. And, even if we had the form of democracy, we might not have its substance. To turn a popular government into a despotism it is not necessary to formally change the constitution, or abolish popular elections. Roman despots governed for centuries through a subservient senate; and it is not impossible that modern despots may govern through a subservient legislature. So far as form goes the United States of America is one of the most democratic countries in the modern world. And yet we have seen there, during the last 50 years, a development of the vilest despotism,—legislators bought and sold, parties become the tools of wealthy corporations, and political power exercised by the worst class of political bosses. There has grown up a class who have all the power without any of the virtues of aristocracy; men who control thousands of miles of railway, millions of acres of land, men who appoint governors and senators and direct the course of legislatures. The situation is similar in Canada. The head of a large railway corporation exercises the political power of ten thousand citizens, and cabinet ministers are appointed by the organized money-power. Industry, with the exception of agriculture, is assuming a form in which one is master and many serve. And, in the face of this, agriculture is declining in importance and strength. The sturdy and independent yeomanry of Eastern Canada are disappearing, many of them

going to serve the rich and powerful in the cities. In the United States there is going on at present a revolt against the domination of money; but in Canada as yet, the new feudalism reigns well-nigh supreme. The press even, that source and organ of public opinion, is coming under the control of the rich and powerful who, if they cannot buy out existing publications, spend lavishly in publishing new journals to deliberately manufacture public opinion. The course of justice, even, may be turned aside by those who have the means of hiring lawyers to protract interminably, legal disputes. And in practically every civilized country crime, insanity and suicide are increasing.

I am, of course, aware of many mitigating circumstances, of many forces which tend to prevent a decline. Popular education is full of hope, the co-operative movement develops association with equality, and we have a great, new, rural Canada in our western provinces, to compensate for the decadence of rural Canada in the east. I dare not forecast the future; but I see danger signals which it were folly to ignore. Unless some means can be found to prevent the concentration of power and wealth in the hands of the few, and to secure an equitable distribution of wealth; unless we can combine association with equality, and maintain a genuine democracy; unless, indeed, we can keep our ship's head towards the kingdom of righteousness, then we must finally become a wreck upon the shores of the great ocean of time, and again tell the old story to those who search those shores for tidings from afar. "History," says Carlyle, "is Philosophy teaching by Experience."

## The Cause and Prevention of Fishy Flavour in Stored Butter.

An address given by DR. F. C. HARRISON to the 46th Convention of the Western Ontario Dairymen's Association.



**R**ESUME of Literature on Fishy Flavoured Butter.—The fishy flavour of butter has been known for a number of years, and in some of the more recent text books on Dairying there are references to this peculiar taste. It is said to have been common in Denmark before the era of pasteurization, but so far as I can ascertain the first reference of importance occurs in the Colonial Dairy Produce Review, compiled and published by W. Weddell, of London, England. About 1900 it is stated that much Australian butter sent to England had a pronounced fishy flavour that was very objectionable and which caused considerable depreciation in price. In 1901 the New South Wales Dairy Expert, M. A. O'Callaghan, found that the fishiness of Australian butter was due to a mould—*Oidium lactis*. By inoculating milk with this organism fishy flavoured butter was produced, while the control portion of the milk produced butter of good flavour. By pasteurizing a portion of milk containing the mould the pasteurized milk produced butter of good flavour, while the control transmitted the fishy flavour. O'Callaghan therefore recommended pasteurization at 168 F., as that temperature readily destroyed the organism. Cleanliness in and about the dairy was urged to prevent the inoculation of the butter during the manipulation of the milk.

DuRoi, however, writing in the Milch Zeitung, found that pasteurizing at a temperature of 158 F. did not always control the fishy taste in butter.

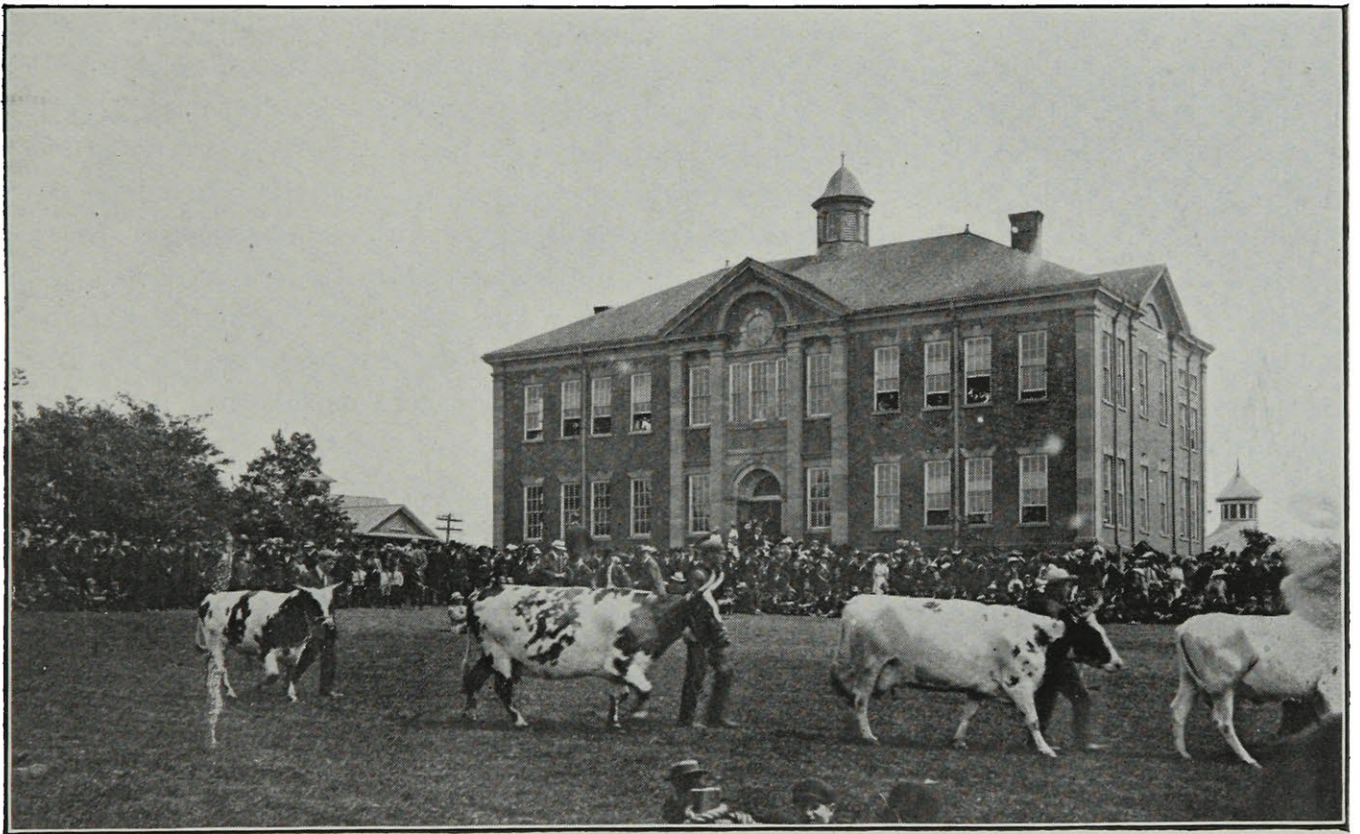
In 1901 there were several discussions as to the cause of fishy butter in the creamery journals, notably one by H. G. Piffard, who attributed the flavour to algae (low form of aquatic life) commonly found in stagnant, fish-flavoured water.

In 1903 appeared a bulletin on studies upon the keeping quality of butter, by L. A. Rogers of the U. S. Dept. of Agriculture. Rogers took two lots of freshly canned butter, kept them at room temperature and examined them at frequent intervals as regards condition, bacterial content, etc., and in from 250 to 300 days the samples showed a disagreeable fishy flavour. An increase in acidity accompanied the change in flavour, and both changes in acidity and flavour progressed steadily after the disappearance of the micro-organisms, showing that the changes were not due to direct action of the living cells. Rogers thought that it was reasonable to suppose that enzymes of the milk, acting alone or in conjunction with the yeasts and the resulting enzymes, was responsible for the so-called fishy flavour in butter packed in large but unsealed vessels.

Later in 1909, L. A. Rogers, of the United States Department of Agriculture, published a bulletin on Fishy Flavour in Butter, in which he states that the trouble is wide-spread in occurrence, but most noticeable in newer dairy sections. It occurred at times in fresh butter made during the summer months, but usually appeared in cold storage butter after it had been held over some time in cold storage, and even low

temperatures did not prevent the development of the fishy flavour. He could not produce the fishy flavour by inoculation with the mould *Oidium lactis*. He did not try the variety with which O'Callaghan worked. No species or group of bacteria could be found peculiar to creameries having trouble with fishy flavour; the only peculiarity of the cream from farms producing fishy butter was the presence of very active lactic acid bacteria. The experimental butters which became fishy were all made from

These seem the principal references to fishy flavour in butter, except one or two which occur in dairy text books, which are as follows:—Lafar, in his text book on Technical Mycology, published in 1904, states that fishy butter is due, or is found to appear when in certain regions pastures are flooded by salt water and the grass or hay made therefrom is covered by small crustacea. The use of common salt made from sea water, or salt which contains much magnesium, imparts a fishy flavour to



*A Farmer's Day at Truro.*

high acid cream. Overworking the butter made from sour cream at times produced fishy flavour. In the opinion of this author fishy flavour is caused by a slow, spontaneous chemical change by which acid is developed and which is favoured by small amounts of oxygen. As a means of prevention he advocated making butter from pasteurized *sweet* cream, and butter made from pasteurized sweet cream with a starter, without ripening, seldom, if ever, becomes fishy.

butter, and there are numerous instances in which the presence of too much salt has resulted in fishiness. A fourth cause is due to micro-organisms.

Weigmann, in his text book on the Mycology of Milk, published in 1911, gives the same causes.

Siedel found that a cause of fishy flavour in butter made from pasteurized cream was due to the washing of the pasteurizing apparatus with soda solution, which, in spite of repeated washing



and rinsing with water, left a grayish deposit on the metal, which seemed to impart a fishy taste to the butter.

*Opinion of produce dealers.* In this connection I wrote to several large exporters of butter in Montreal, asking them if they had had any experience of this defect in Canadian butter, and if so to what extent, and to what degree it depreciated the value of the article. I received a number of instructive replies, which I may summarize as follows:—

1. "There have been many theories as to the cause of 'FISHY FLAVOUR' in butter. Formerly 'FISH' was given as a reason, then 'SALT,' then 'SALT THAT HAD BEEN NEAR FISH,' then 'SALT STOWED IN VESSELS CROSSING THE OCEAN,' but more recently the fault has been attributed to 'DIRT' in various forms, the flavour being taken in through the milk or cream or through the salt. Probably the fault comes more frequently through the 'SALT' than in any other way, but we are satisfied that there are other causes."

2. "We have met with this flavour in butter quite frequently, and fishy flavour butter usually sells at 1 to 2 cents per pound under the price of finest, the depreciation, of course, depending upon market conditions. It has been our experience that fishy flavour is not often met with in new butter, but generally arises in butter that has been held in cold storage for some length of time. We have also noticed that when butter is very mild salted the fishy flavour does not seem to develop to the same extent as in higher salted butter."

3. "Re 'Fishy Flavoured Butter.' This is a common fault with all held butter, and we think only an exaggerated term for 'staleness,' at least the two go hand in hand. It is a question of degree.

The lower the temperature the slower the process. We think salt sometimes turns butter fishy. 'Saltless' butter is rarely fishy in low temperature.

"As to the value of these faulty flavoured butters, it is a question of degree again. Personally, I would not have fishy butter on my table as a gift, but there are many people who seldom or never get anything else; of course, they don't know as I do. Ordinarily, such butters have to be sold at 1 to 4 cts. per lb. under finest, mild, fresh flavoured. Canadian tastes have changed very much the last few years as regards butter, and it is more difficult to sell low grades than formerly, even at the reduction. There is not so much fishy butter as formerly, because we think it goes into consumption more regularly now than in former years."

From the results of former investigations and from the opinions of leading wholesale butter merchants it seems pertinent to enquire if the term "fishy" accurately describes the flavour or trouble complained of. I have noted often that expert judges seldom agree in their description of a specific flavour, and it is certainly necessary to have a standard for comparison. Shall we define fishy flavour as a peculiar oily taste suggestive of certain parts of a fish such as salmon or cod, or shall we enlarge the definition and apply it to any kind of an oily taste present in butter? You will note that a Montreal exporter goes even further and states that he thinks it is only an exaggerated term for staleness. The matter is more important from the biological than from the buyer's standpoint, because we may have a number of different living agents producing the different shades or degrees of bad flavour, for example, the causal agent of "staleness" may be entirely different from the causal agent of a true fishy taste.



I think it is reasonable to assume that fishy flavour may be imparted to butter by poor salt, probably of sea origin, and by certain small crustacea, but we may set these reasons aside, for under our conditions these are seldom, if ever, met with. Let us discuss, therefore, those most likely to occur under Ontario conditions.

I think most makers who have to make butter from gathered cream will agree with me that during the hot weather the cream received at the factory is *over-ripe*. It has quite a high degree of acidity and in many cases a secondary fermentation is commencing. The task of the maker to produce a first-rate article from such raw materials becomes at once a very difficult one, for the control of the acid fermentation is beyond his control and secondary products are being formed in the butter by a variety of organisms. Even pasteurization of stale cream would not bring the best results, for many of the changes go on without the organisms, but through the agency of enzymes elaborated by them.

Such organisms as varieties of *Oidium lactis*, moulds such as *Penicillium glaucum* (the common blue green mould), *Cladosporium butyri*, are all fat splitters, and such commonly found organisms as *Bacillus fluorescens*, a common organism in water, *Bacillus mesentericus* or potato bacillus, *Streptothrix odorifera*, and many others belong to this fat splitting company and produce undesirable flavours in butter. Another factor which I believe gives a disagreeable fishlike flavour is a bacterial substance known as indol, and which is produced by a number of fecal bacteria, such as the *Colon bacillus*, *B. lactis aerogenes* and many others.

Tri-methylamine, which has an odour of herring brine, undoubtedly gives a

disagreeable flavour to butter, which may be termed fishy. Rogers denies the statement of O'Callaghan that this substance (tri-methylamine), which is produced by *Oidium lactis*, gives rise to a fishy flavour, but we must remember that under the name *Oidium lactis* are included a large variety of organisms, some of which undoubtedly produce poor flavour. I recall an instance of this.

Dr. Weigmann, the director of the Dairy Experiment Station at Kiel, and one of the leading dairy authorities in the world, prepared and sold a starter for buttermakers which contained a lactic acid organism, together with a variety of *Oidium lactis*. The combination or mixed culture gave excellent results and a fine flavoured butter, that, however, had a very limited keeping quality, which, Dr. Weigmann told me, was due to the action of the *Oidium* decomposing the butter fat, and giving rise to an undesirable flavour. Hence, he could not recommend this culture for the preparation of butter for export purposes, but only for butter which was quickly consumed. I had samples of this culture, and in some experimental work confirmed the conclusions of the German expert.

Again, Rogers states that large quantities of tri-methylamine could be worked into butter without producing any trace of fishy flavour. I believe this statement true, but find that if minute quantities are employed there is a decided fishy flavour. If one smells a bottle of 33% solution of tri-methylamine no trace of fishy flavour can be noticed, but make a large dilution by adding a drop to a cupful of water and the smell is instantly noticed even at a distance of several yards. Hence, any organism able to produce this substance (tri-methylamine) in butter may give rise to a fishy taste,

and we know that many producing this substance are found frequently in butter.

Recently a Japanese investigator, Tsujimoto, has found that the odour of fish oil is due almost entirely to clupanodonic acid. This acid by the addition of more hydrogen atoms becomes stearic or oleic acid, and it is possible that oxidation of stearic acid or stearin and oleic acid or olein might result in the formation of clupanodonic acid and thus give a fishy flavour. This is merely an hypothesis, and may be the explanation of Rogers' surmise—that "fishy flavour is caused by a slow, spontaneous chemical change by which acid is developed and which is favoured by small amounts of oxygen."

A high acid production, or the presence of lactic acid bacteria giving high-acid cream, evidently is another factor which encourages secondary changes, among them a fishy flavour.

*Prevention.* Undoubtedly, Rogers' remedy of making butter from pasteurized sweet cream prevents fishy flavour, but this remedy cannot be carried out under our present system of making butter from gathered cream.

We must either take precautions to obtain cream in better condition or use some method of treatment in the factory. The most obvious method of improv-

ing the gathered cream is a campaign of education to show patrons the necessity of cleanliness in each detail connected with milking and separating, and the importance of immediate cooling and holding the cream at a cool temperature until it arrives at the factory. These details have been given so often that I need not enlarge on them at the present time.

The proper treatment of over ripened cream at the factory is a more difficult question. Some recent experiments have shown that ozone may be used for deodorizing stale cream. The cream is first pasteurized and then carried to an agitator and treated with ozone for 40 minutes. The cream is slightly bleached by this process and completely deodorized and the acidity reduced one half. After cooling, the cream is churned into butter. Butter made by this process grades as No. 1. Such a process would have to be carefully investigated under factory conditions and the cost carefully computed before it could be adopted with certainty; but if Ontario makers are finding it difficult to manage gathered cream successfully, and if they cannot obtain cream sufficiently sweet for the best manufacturing result, then, some process such as that described would seem advisable in order to secure the best results.

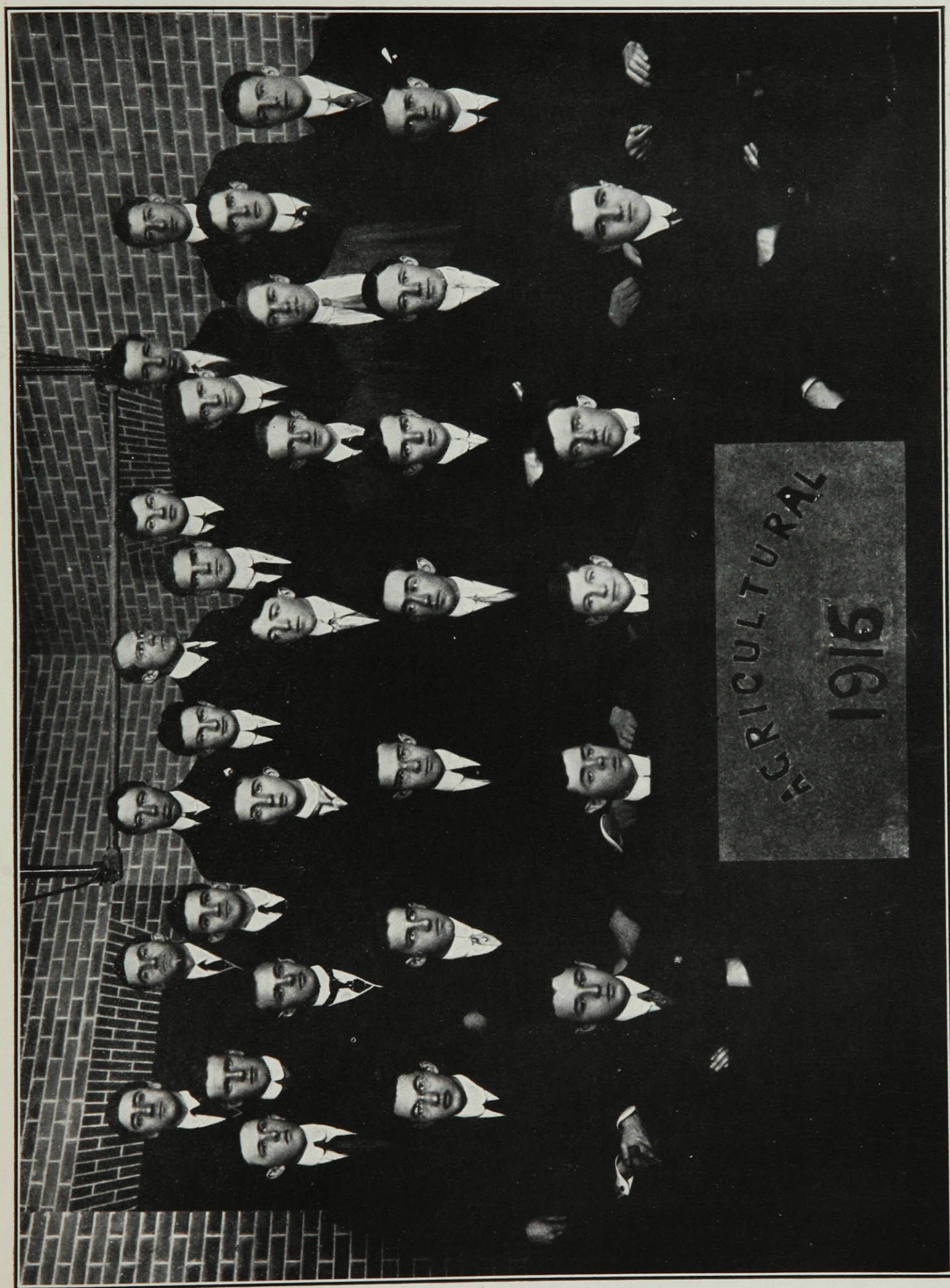
---

## HEART'S-EASE.

All my hurts  
 My garden spade can heal; a woodland  
 walk,  
 A quest of river grapes, a mocking thrush,  
 A wild rose, a rock-loving columbine  
 Salve my worst wounds.

—R. W. Emerson





## La Langue Française au Canada.



L arrive parfois, à une certaine époque de la vie d'un peuple, qu'un besoin impérieux de centralisation des idées et des idéaux nationaux se fait sentir plus irrésistible que jamais. On éprouve comme une nécessité de se revoir, de se compter, en un mot de faire l'inventaire de ses forces et de ses dispositions afin d'en tirer tous les avantages possibles pour le bien commun de la nation.

Depuis la conquête du Canada par l'Angleterre, les Canadiens-Français, dispersés sur cette immense étendue qu'est le pays compris entre Vancouver et Halifax, ont eu à soutenir des luttes incessantes, pour la sauvegarde de leur langue et de leur autonomie nationale, contre un élément étranger, toujours plus nombreux et plus fort.

C'est donc pour répondre à ce besoin et grouper les membres isolés de la grande famille canadienne-française que s'est tenu à Québec au mois de juillet dernier le "Premier Congrès de la Langue Française au Canada."

"Solennellement affirmer le droit sacré que nous avons de parler la langue française au Canada; rendre hommage aux défenseurs de notre langue et saluer d'un souvenir ému la mémoire de ces amis sincères qui, bien qu'appartenant à une autre race, n'ont pas craint de mettre au service de la nôtre leur parole ardente et victorieuse." Telle était la ligne de conduite à suivre pendant le cours des séances tenues à l'Université Laval et au manège militaire de Québec.

Ce projet noble et patriotique a été réalisé dans toute sa conception, et le succès remporté a compensé les efforts des organisateurs de ce congrès.

Des délégués de toutes les parties du Canada sont venus apporter à Québec,

centre de l'élément français de toute l'Amérique du Nord, les vœux et les sentiments de profond attachement à la langue maternelle, qui animent leurs compatriotes. Ils sont venus payer publiquement un tribut d'hommage au "doux parler de France" et lui redire, eux aussi, cette belle devise de la Province de Québec, "Je me souviens." Nos meilleurs orateurs se sont faits les interprètes du sentiment national et ont exalté en termes chaleureux et patriotiques les bienfaits et les avantages de la langue française.

Dans un temps où les tendances de quelques esprits étroits et jaloux vers l'abolition de la langue française, deviennent de plus en plus marquées, il est important de rappeler les raisons que nous avons de parler français et les sentiments inalinéables qui nous attachent à cette langue.

Pour bien comprendre le rôle qu'a joué la langue française dans tous les temps, nous n'avons qu'à la comparer aux autres langues et définir l'adaptation de chacune d'elles aux besoins et sentiments des nations qui les parlent.

Tout le monde admet que la langue anglaise est la langue du commerce. Sa précision, sa brièveté et la tournure plutôt latine de sa phrase la rendent apte à exprimer beaucoup en peu de mots, de là son adaptation toute spéciale au commerce et à l'industrie.

L'allemand est plutôt lourd et rude; sa conception n'est pas aussi précise que l'anglais, mais sa phrase est plus profonde et s'adapte très bien aux sciences en générale et à la philosophie en particulier.

En effet personne ne cherche à contester au peuple allemand sa suprématie des sciences.

L'italien est tout différent. Autant



l'allemand est rude et sonne dur à l'oreille, autant l'italien est doux et agréable à entendre. Son audition nous donne l'impression d'une musique suave et harmonieuse; c'est un chant continu, mais un chant qui enivre et qui pénètre l'âme. C'est une musique expressive, aussi voit-on, sur toutes les compositions musicales, les nuances exprimées en italien. C'est l'art de l'Italie et de ses habitants. On pourrait dire des Italiens ce qu'on dit des poètes: "nascuntur musici"...ils sont nés musiciens et leur langue est la fidèle interprète de leur état d'âme, elle est la langue de la musique.

Mais plus que toute autre la langue française exprime l'âme d'un peuple. Elle s'est modelée sur la langue de Démosthène, d'Aristophane, d'Euripide et de tous les autres principaux auteurs de la Grèce. Elle a acquis de cette dernière sa souplesse et son grand champ d'adaptation. C'est donc dans le domaine de la littérature qu'elle a dominé les autres langues et elle s'y trouve parfaitement à son aise. Son influence s'est bientôt répandue chez les autres peuples et elle les a guidés sûrement à travers les sentiers innombrables de la prosodie et de la rhétorique tout en demeurant leur maîtresse et précurseur. Sa souplesse et la compréhension sans ambiguïté de sa phrase ont acquis l'intérêt de tous les plénipotentiaires du monde et lorsqu'il s'est agi d'adopter une langue pour le royaume de la diplomatie, on n'a pas hésité à choisir la langue française.

Langue supérieure dans le domaine de la littérature; langue diplomatique s'assimilant avec facilité aux détours et aux précautions oratoires elle ne devait pas tarder à devenir une langue universelle. Ce dernier champ et non pas le moindre, elle l'a conquis définitivement par son attrait irrésistible. On parle le français

dans toutes les cours de l'Europe aujourd'hui et, dernièrement encore, les clauses du traité entre l'Italie et la Turquie étaient écrites en français.

Nous avons donc raison d'être fiers de notre langue et de la garder comme un héritage précieux de nos ancêtres. Notre instinct d'ailleurs ne nous tient-il pas attaché à notre langue? Ne nous avertit-il pas que le jour où nous aurons perdu notre langue nous perdrons précisément ce caractère propre, ces facultés spéciales qui peuvent faire de nous un élément désirable pour la construction de la nation canadienne. Le jour où nous aurons perdu notre langue, nous serions peut-être des Anglais médiocres, des Ecossais passables ou de mauvais Irlandais, mais nous ne serions plus de véritables Canadiens.

A ceux qui veulent l'abolition de la langue française au Canada, nous pouvons opposer ces belles paroles que Sir John Macdonald prononçait naguère devant un auditoire en majorité anglaise: "Je ne partage pas," disait-il, "le désir exprimé dans certains quartiers qu'il faudrait, par un moyen quelconque, opprimer une langue ou la mettre sur un pied d'infériorité vis-à-vis d'une autre. Je crois que l'on n'y parviendrait pas si la chose était essayée et que ce serait une folie et une malice si la chose était possible. La déclaration souvent faite que le Canada est un pays conquis est sans à-propos. Que le Canada ait été conquis ou cédé, nous avons une constitution en vertu de laquelle tous les sujets anglais sont sur un pied de parfaite égalité, ayant des droits égaux en matière de langue, de religion, de propriété et relativement à la personne. IL N'Y A PAS DE RACE SUPÉRIEURE, IL N'Y A PAS DE RACE CONQUISE ICI: NOUS SOMMES TOUS DES SUJETS ANGLAIS ET CEUX QUI NE SONT PAS D'ORI-

GINE ANGLAISE N'EN SONT PAS MOINS SUJETS BRITANNIQUES."

Je pourrais citer bien d'autres témoignages d'hommes illustres qui, quoiqu'étant de race différente à la nôtre, ont su rendre justice à l'âme canadienne-française et respecter sa langue. Je me contenterai de répéter encore une fois que nous sommes complètement justifiables d'affirmer et de revendiquer le droit sacré que nous avons de parler français au Canada.

Ce congrès de l'été dernier a indiqué notre vitalité; il a aussi indiqué aux yeux étonnés de ceux qui veulent l'abolition du français dans ce pays que le miracle canadien, dont parlait Maurice Barrès, est plus vivant que jamais, et qu'un peuple qui a pu conserver sa langue après avoir supporté tant d'épreuves, après avoir livré tant de combats, a droit à la vie et droit surtout qu'on le considère autrement qu'un peuple inférieur.

Inférieurs, certes non, nous ne le sommes à personne. Les qualités que nous possédons sont notre propriété et nous avons su les faire reconnaître aux

racés avec lesquelles nous sommes en contact journalier. Nous avons même fait plus, nous leur avons pris leur langue et nous avons conservé religieusement la nôtre.

En terminant cet article, je ne puis rendre un plus beau témoignage à ma langue maternelle, je ne puis en faire un plus bel éloge que ces paroles de Sir Lomer Gouin, à la séance d'ouverture du Congrès: "Langue de pitié et de colère, ouverte à la divine tendresse et à l'énergie ardente, elle est le miroir où se reflètent dans leur diversité plaintive les sentiments, les passions et les misères de tous les pauvres humains nos frères

Langue si limpide qu'elle est un filtre pour la pensée, si riche qu'elle peut tout dire, si souple qu'elle fait entendre tout ce qu'elle ne dit pas, si nette dans ses couleurs, si ferme et en même temps si douce qu'elle est une caresse autant qu'une joie pour l'esprit. Saluons-la, saluons-la bien bas. Elle est reine parmi ses sœurs les autres langues, Sa Majesté la Langue Française."

F. NARC. SAVOIE.

---

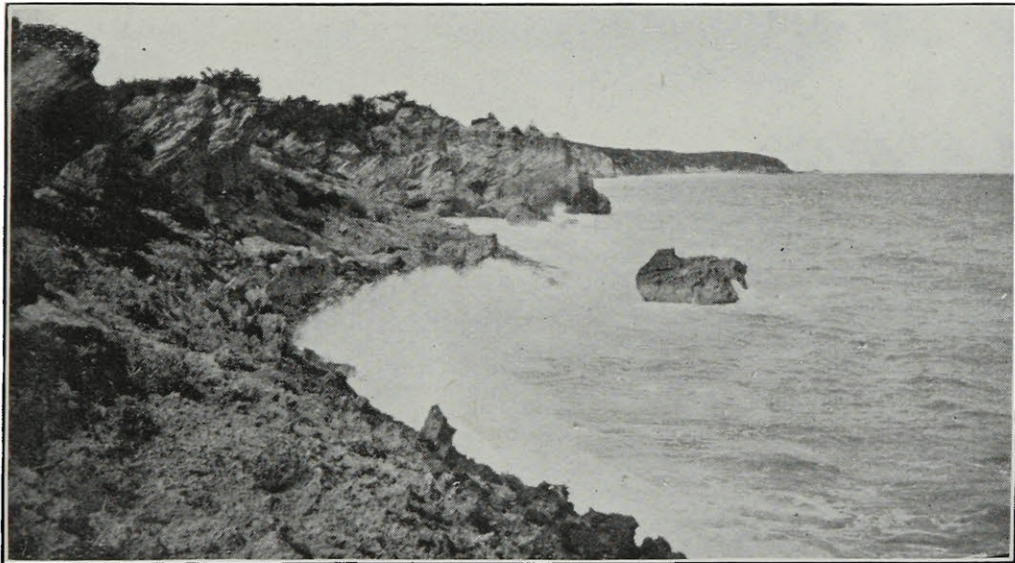
## Bird Life in the Bermudas.

By CLARENCE B. HUTCHINGS, Agr., '16.



THE Bermudas are a veritable birds' paradise. These semi-tropical islands, which lie 750 miles to S. E. of New York, form a very charming and picturesque group, and are especially famous for their wealth in bird life. The birds for the most part are particularly tame and appear at their best in the beautiful home gardens in which bloom luxuriantly, all the year round, roses, lilies, oleanders, crotons, palms, together with many

About the beginning of March the returning tide of bird life commences to set in strongly from the South. These birds are for the most part waders and water birds, such as the plovers, curlews, sandpipers, snipes, etc. They have been wintering in the swamps and everglades of Florida and are now bound for the Canadian rivers and North-West swamps where they will arrive just about the time of winter's breaking-up. A little later on, about the end of March or beginning of April, numbers of herons,



*A Bit of Bermudian Seacoast.*

kinds of fruit such as loquats, pomegranates, figs, Surinam cherries, limes, mulberries and the like. Here conditions are right from the standpoint of food, climate, and protection, for almost every kind of wild bird in North America. It is therefore not surprising that millions of birds visit these islands every year on their flights North and South, at the two periods of migration, in the spring and fall, some to remain a few hours only, others to stay for months at a time.

crossbills, cranes, and ducks touch by, and night hawks may be seen about this time, skimming over the low marshes and swamps of the islands, just at the dusk hour. Next follow the spring birds of the woods and orchards. The scarlet tanager, with its beautiful black wings, the indigo-bird, the rose crest grosbeck arrive together in May, followed by the American cuckoos that remain a good part of the summer. Then come the summer birds, among them being the cardinals, king-fishers, tropic birds



or long tails—so called from the one long white feather in the tail—blue birds, mocking birds, woodpeckers, warblers, finches, and a host of others, too great to mention here. The majority of these summer birds will remain on the islands during the warmer months of June, July and August, building their nests and rearing their young ones, until about September, when they commence to leave again for the South.

Just what power birds possess in shaping their migration flights and what

raphy of the country at night, when flights are mostly made, as being somewhat erroneous. He was of the opinion that on their long flights birds are guided by the stars, and he supported his theory by citing as evidence the fact that "when the stars are obscured by clouds the flocks become bewildered and seek the ground." Birds possess the sense of perception in a much greater degree than man, and, under like conditions, as a navigator at night makes his observations and directs his course by the stars,



*A Road in Bermuda.*

directs the course they pursue is not definitely known. It has been attributed to their natural instincts. They never fail to reach their ultimate destination. In a very interesting article which appeared in the *St. Louis Republic*, some time ago, the writer, a scientist, discussing the subject of bird migration, considered the idea of birds flying in the rarified atmosphere, three miles above the earth's surface, and being guided by the topog-

so it seems reasonable to assume that birds do the same. It may be stated here that it has been noticed in Bermuda, after very dark nights, large numbers of migrants are found all over the islands, waiting as it were for the next clear night on which to resume their journey.

Few countries, if any, offer better protection to bird life than Bermuda. No shooting of any description is permitted. People are not even allowed to possess

weapons or firearms of any kind. One of the questions asked by the customs inspector as the stranger walks off the boat is: "Have you any firearms?" If he has, the weapon is taken charge of until he departs. Under the Wild Bird Protection Act, *which is most rigorously enforced throughout the islands*, any person attempting to shoot, trap, or interfere with the liberty of any of the wild birds—sparrows and crows excepted—is liable to a penalty of \$25.00, and the mere fact of possessing a wild bird's egg is quite sufficient to constitute a breach of the law.

In this matter of bird protection, little Bermuda can teach us here in Canada more than one good and profitable lesson. It is a very well known fact that around some of our big cities and suburbs, alone, a wholesale and wanton destruction of bird-life goes on year after year, chiefly due to youthful miscreants and brutal men who are allowed to range at large, practically unchallenged and unrestrained, firing their murderous weapons at everything within sight. Within the last month, a bill, known as the "MacLean Bill for the Protection of Bird Life in the United States of America," has been passed by the Senate at Washington. Previous to this, birds migrating from one state to another were ruthlessly exterminated in certain States where there was no law against reckless slaughter. The above bill, however, provides for such cases as these, and it is to be hoped that the law will be enforced.

The matter of bird protection is one which calls for concerted action. It should not be limited down to that of one state or one country, but should receive the hearty endorsement, support and assistance of all right-thinking people throughout the whole of this great North American continent. Birds do not stop at boundaries, and since their haunts of

winter and summer are often thousands of miles apart, all countries through which they pass, whether Bermuda or Canada, or Mexico, or the States, should be especially interested in their protection, and this more particularly during the breeding and hatching seasons. Any diminution of the birds in the United States *must* affect us here in Canada, and *vice versa*. Therefore, everyone should try to do what they can to put a stop for all time to this repulsive and senseless slaughter of valuable bird-life.

But to return to our subject after this digression, the native birds are numerous and interesting. Among them should be mentioned: the red birds of gaudy plumage; the ground doves, small, compact, grey birds, whose coo is very similar to the ring doves; partridges and grouse, met with occasionally on the country hillsides; trim little vireos, goldfinches, rice birds, and humming birds.

Apart from their great beauty and song, a very large number of the feathered visitors are of the greatest economic importance and benefit to the farmers and gardeners throughout the islands. Some, like the sparrows and shore larks, feed exclusively on seeds during winter; others, such as the woodpeckers, nut-hatches and warblers, prefer insects only; the cuckoos find the hairy caterpillars make a very palatable dish, and these birds may often be found near potato fields, where the hairy caterpillars are abundant. Bluebirds are indefatigable grub hunters. They will perch upon a fence or wall near by a freshly plowed field, from where they are able to pounce down readily upon their prey, and, having secured some big fat worms, will return to their stand to eat them. The vireo or chick-of-the-village, as it is called in Bermuda, is another very



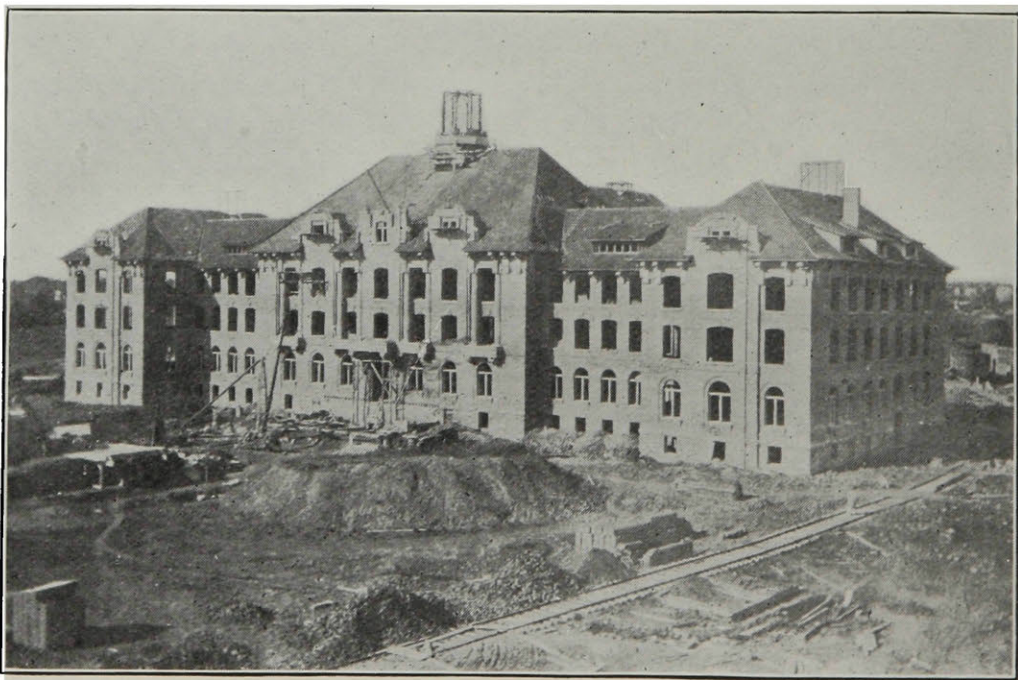
valuable insect destroyer. It has a habit of alighting on the twigs of trees, swaying head downwards and in every direction, like an acrobat, jumping and flying from branch to branch, catching many an unwary insect as it goes. The black-bird is perhaps one of the most destructive of the native birds. He is very fond of small fruits and will do quite a lot of damage to grapes, strawberries and Surinam cherries. The last-mentioned fruit is specially relished by him. He however repays for this pillage by eating his full share of grubs and worms, occasionally favoring with a song.

The greatest enemy of all the song birds is the English sparrow, the most undesirable immigrant ever brought to the islands. It is not an uncommon sight to see half-a-dozen pugnacious

cock-sparrows attacking a cardinal bird, the fight generally resulting in the death of the songster. It may be said, however, that, apart from the sparrows and a few hawks, the song birds enjoy a comparatively free and easy time of it. Snakes do not trouble them because there are no snakes on the islands, and the Bermuda boy—be it said to his credit—seldom ever robs a bird's nest.

To the student of nature and ornithologist, Bermuda willingly opens her charming laboratory, and those who take advantage of this offer usually return to follow up their work.

The study of bird-life is always an interesting one, but when presented under such ideal and unique conditions as the Bermudas offer, it becomes one of special instruction and fascination.



*Macdonald in the Making.*



## Road Construction.

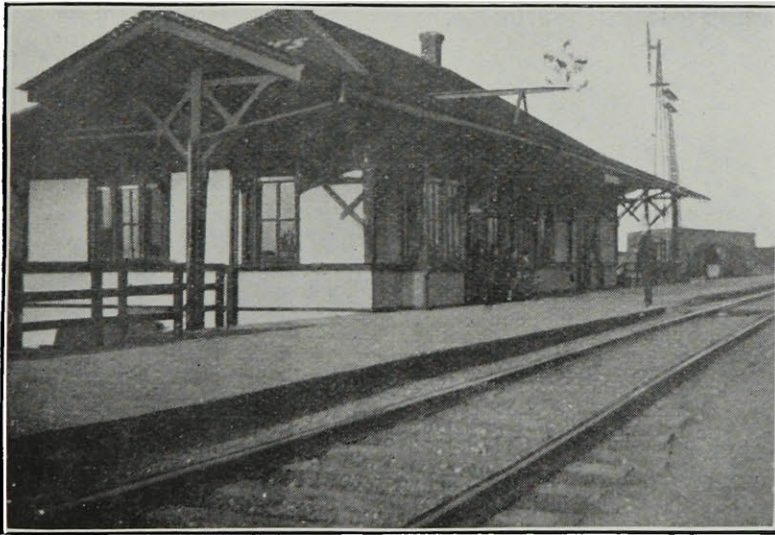
By W. G. MACDOUGALL, Agr., 14.



THE people of this Province are beginning to realize that it is to their best interests to improve their highways.

There are many miles of roads in Quebec which are impassable during a month or so each spring and autumn. The farmer, especially, is now seeing the advantages to be derived from good roads. To assist him in the work, the Provincial Government is offering to lend large sums of money at a low rate of interest. The problem now is to show the farmer the best methods of road construction.

1. Follow the route having the easiest grades.
2. Select the shortest and most direct route commensurate with easy grades.
3. Avoid crossing all hills and mountains possible.
4. Avoid going through all ravines and hollows possible.
5. Cross streams in the narrowest place possible.
6. While straightness is an advantage, it is often obtained at the expense of easy grades.



*The C. P. R. Station.*

A road should be so located as to permit the passage of traffic from one given point to another with the least possible expenditure of time and energy; but due consideration must be given to the initial outlay in the construction, and the subsequent outlay in the maintenance of the road, so that the total cost will not be greater than the resulting benefits. There are a few principles that should help to determine the location of a road.

There are some places in this province where gravel would be the cheapest material for road-making, though perhaps not the most economical. In order to construct a good gravel road, the gravel should possess such qualities as hardness, toughness, and cementing or binding power. The most important of these three qualities is the last. This binding quality is due, in part, to the presence of iron oxide, lime and ferruginous clay, and partly to the size and angular shape of the pebbles composing the gravel. Blue gravel is considered to be the best for road construction, as it is usually derived from hard rock. The pebbles should be angular so as to bind readily, and they should vary in size so that the smaller pebbles will fill voids between larger ones. The largest pebbles should not be more than two to two-and-one-half inches in diameter. The

gravel should not be too fine as it is difficult to consolidate.

In order to construct a gravel road a sub grade must be laid. After the width that the gravel is to be placed on is determined, it is advisable to scrape out this width for a depth of a few inches. Then the sub grade of flat stones is laid, the centre being from two to three inches higher than the edges. The stone on top should be broken and rolled till compact. The gravel is then placed on the subgrade to a total depth of from eight to twelve inches in the centre, tapering off to a depth of from four to eight inches on the sides. In places it has been found advisable to screen the gravel and place it in layers, the coarser grades being used for the foundation. Each layer should be sprinkled and rolled with a heavy roller weighing not less than two tons. If it is not possible to use a roller, the road should be laid in early spring, if possible, as the heavy rains help to compact it. If a screen cannot be used, the coarser grade may be put in as the foundation by the use of a fine iron rake. In this way, by raking the coarse grade forward, you get it for the foundation. A road constructed in this way will prove satisfactory if the foundation is properly drained.

Having considered the gravel road, we come to the broken or crushed stone road, which is more economical. The best stone for crushing is obtained from a quarry. There it is possible to get stone that will be harder and that will not break into dust so readily. A crushing machine is essential. This machine is provided with a suitable elevator, and with screens for separating the crushed stone into their proper sizes or grades. This screen separates the crushed stone into three grades, the first being under one-half inch, second being under one-and a-half inches and above one-half

inch, the third being over one-and-a-half inches and under three inches. If the rock is inclined to be soft, the first two grades might be a little larger. The steam roller is essential for the construction of the crushed stone road. It has a great advantage over the old-fashioned horse roller, as it is much heavier, thus compacting the surface better. Another essential in the construction of rock roads is the sprinkler. The sprinkling should be done before each rolling.

As in the gravel road, the crushed stone road must have a subgrade. This subgrade must be hard, smooth and carefully crowned. It is advisable to break any rough stone on the surface of subgrade with a sledge hammer. A smooth, compact subgrade is necessary to prevent undue waste of stone. The subgrade should be ten to thirteen feet in width. Of the roads that have already been constructed in this province, many of them have not more than eight to nine feet subgrade. This will serve for a single track road where the loaded traffic is in one direction, and a good clay road along one side of the stone road, otherwise it is far too narrow. Thirteen feet will allow carriages to pass safely. After the subgrade is laid, it should be rolled until it is hard and thoroughly consolidated.

Once the subgrade is ready the crushed stone is put on. This is applied in courses, the coarsest grade being put on first, then the other two grades in order. The crushed stone is usually levelled with shovels. When about one hundred feet of first course has been spread, the rolling should commence. Each course is sprinkled before rolling. The roller should commence on outer edge of road and work towards the centre. When the centre has been reached the rolling should commence on other edge





*Agriculture, 1915.*



and rolled in the same way. After the first course is rolled and thoroughly compacted, the second course is spread and then rolled. If there are any depressions after this rolling they should be filled with this grade of stone. Once the second course is consolidated the fine grade is applied. This course should be spread in successive thin coats with alternate rolling and sprinkling.

Drainage is absolutely essential for the crushed stone road. The road should be so constructed that the water will run to the side ditches as quickly as possible. The ditches should be such as to carry the water away quickly. The ground water should be removed to such a depth that there will be no danger from the heaving action of the winter frosts.

After a road is properly constructed it will be necessary to maintain it by repairing it occasionally. The weather, wheels of waggon and carriages and shoes of horses all tend to wear the stone road. In springtime, after the snow and frost are gone, all the loose stones should be removed, and all ruts and depressions should be filled with fine crushed stone. This will help to keep the road in a smooth condition. Then the steam roller is also very useful in maintaining

the roads softened by the winter frosts. A few trips over the roads with the roller in the spring, after the frost is gone, will remove the slight ruts beginning to form, and re-compact the road surface, leaving it hard and smooth.

Those of us who have lived in the country have noticed a contrast in the way in which the different farmers keep their roadsides. After a road is constructed all rubbish and brush should be removed from the roadside. Then grass seed should be sown and suitable shade trees planted at intervals, so as to provide a pleasing appearance, shade for the traveller and protection to the road from drying out too rapidly. A road that is shaded suffers less damage from hard driving rains. Trees prevent the wind from carrying off the sand and rock dust of the road, and a road shaded by trees is cooler by day and warmer by night during the summer, and warmer both day and night in winter. They are a partial preventive against the destructive action of frost. Select a tree that is adaptable to your conditions, one that is hardy and has good foliage and is a rapid grower. The elm and soft maple will fill these requirements in many localities.

---

When the month seems kinder gloomy,  
And the chances kinder slim,  
And the situation puzzling,  
And prospects awful grim,  
And the perplexities keep pressing,  
Till all hope's nearly gone,  
Just bristle up and grit your teeth  
And keep on keeping on.

—*The Argosy*.

# Possibilities of Agriculture in the Eastern Townships.

By J. H. M. PARKER, ESQ., Lennoxville, Que.



THE possibilities of agriculture in the Eastern Townships, in the opinion of the writer are very great. No doubt our farms have been abused and are in many cases badly run out, but they are not beyond repair. They have been badly starved, but with plenty of substantial food and a little stimulant they can be brought back to a very productive state. Weeds have over-run them, but by better methods of cultivation and a nice little flock of sheep this can be overcome. In order, however, to get control of them we must see that the Government supply a weed inspector, and that it force municipalities and railways to keep their weeds cut.

We are also farming too much land, or in other words putting the labour on one hundred acres that should be put upon fifty. With the amount of labour and fertilizer applied upon one half of the ground we should harvest as large or larger crops. This I have proved to my entire satisfaction, and it has been proved to be the case at Macdonald College and the Experimental Farms.

Now, how should we begin to redeem our farms? First of all, abandon all obsolete methods, and make up our minds that our Experimental Farms are kept expressly for our benefit, and that what they tell us has not proved satisfactory we had better leave alone. Watch all their experiments and make use of them. Be very careful what seed we purchase; always test them before we sow them. Never sow feed grain just because it is cheap; do not buy seed grain or grass seed from a feed store unless it has all been tested. Keep in touch with Macdonald College at all times as that Institution was built and

is maintained for the farmers of the Province of Quebec. The Local College Demonstrator will help us not only with his own knowledge, but through the whole staff of the College. In my opinion it should be the aim of every farmer to visit Macdonald College once a year, and every farmer who has been blessed with a son, to send him to that institution for a term as soon as he is old enough.

With a careful purchasing of seeds, using modern machinery with plenty of power and proper cultivating, the Eastern Townships is as good a portion of Canada as there is for clover and other fodders; but we have been in the habit of raising as the bulk of our fodder crop, one of the most destructive and expensive of all crops, and the one that will destroy our farms the quickest, namely, timothy. The sooner we replace that crop or the most of it at least with clover, the sooner we will improve our farms in the most needful element, nitrogen.

The Eastern Townships is better adapted to the rearing of sheep than any other portion of Canada, and this although the most profitable branch of live stock is sadly neglected, not only in quantity but also in quality. Sheep are profitable as weed destroyers, as a producer of fertilizer, as a wool and meat producer, but require the least attention of any stock.

Then again the possibilities of raising heavy horses in the Townships are unlimited, if we will make up our minds not to keep mixing breeds as we have done heretofore. Stick to one breed for all time. If this is done, with the luxuriant pastures of the Eastern Townships, there is no part of Canada that can beat us.



W. NEWTON, EDITOR.

# The Improvement of Small Grains at Macdonald College.

By L. S. KLINCK, Professor of Cereal Husbandry.



THREE systems are employed at Macdonald College in an attempt to maintain the purity, increase the yield and improve the quality of small grains. Head-selection is practiced annually to keep standard varieties free from mixture; the centgener system is used to isolate and multiply promising mother plants; cross-breeding is employed to combine into one individual the desirable qualities existing in two or more pure line strains of proven worth.

These systems constitute progressive stages in the improvement of small grains. Careful head-selection must precede intelligent centgener tests. Cross-breeding cannot be most advantageously employed unless pure line strains of proven efficiency are used as foundation stock.

In this paper I shall confine myself to a discussion of our method of em-

ploying the centgener system and then deal briefly with some of the results obtained by this means during the past six years.

When the improvement of a given variety is undertaken, a hand selection is made of the most typical heads from the standing plot. During the winter a careful laboratory study is made of the heads and grains and the most typical are used the next spring for planting the foundation beds.

These beds, for convenience of planting and for facilitating a study of the resulting plants, are 100 links by 10 links. Only the most uniform parts of the experimental grounds are used for this purpose. The preparation of the seed bed is largely performed by hand labour. When properly fined and levelled, each bed is marked off into squares four inches each way and a single seed is dibbled in at the corner of each square. This distance between



plants has been decided upon because, so far as space is concerned, it approximates field conditions as closely as is consistent with enabling one to make a careful study of each individual plant.

At harvest time the two outer rows in the foundation beds are discarded, as plants so situated have had a decided advantage over those in the centre of the plot. If a seed has failed to germinate, or if for any reason a plant has been destroyed, all plants immediately surrounding the blank space are discarded. Likewise all inferior and all mediocre plants are rejected and only

hundred and forty plants gives about one hundred and fifty individuals of sufficient promise to warrant careful laboratory study. From this number not more than ten or twelve individuals, on the average, will measure up to standard requirements. These are threshed separately and the number and weight of the grains to be used in planting the centgener for the next year is determined. This somewhat full information is recorded not only for future reference but also to enable one to plant exactly the area required for next season's planting.



*Centgeners harvested and covered with netting to protect them from injury by birds.*

those which, from a study of their physical characters, give evidence of making some advance over their fellows, are retained as possible progenitresses of new strains.

In harvesting foundation beds each plant is pulled up separately by the roots and carefully examined. Individuals which give promise of meeting our requirements are taken to the laboratory where a much more careful study of the plant, straw, head, and grain is made. Usually a bed of three thousand nine

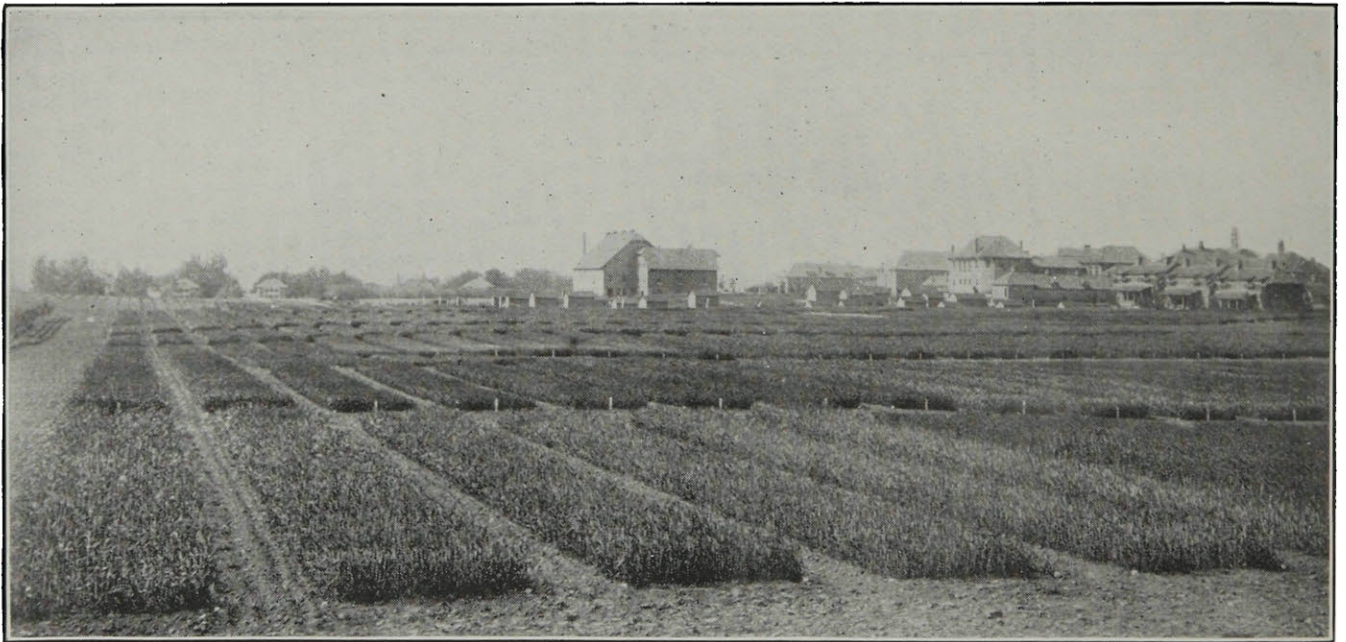
Centgener beds are planted the same as foundation beds except that two rows of a different grain are planted between centgeners. When these are removed at harvest, and the outer rows on the beds which are also planted with the same kind of grain are removed, the progeny of each mother stands out clearly and so enables one to make a careful comparative study of the different strains. Those centgeners which have not bred true to the characters of the mother plant are discarded; those



which have are harvested after full field notes have been taken. During the following winter each centgener is subjected to the same rigorous selection to which its parent was put the preceding year. Those which reach the high standard set for yield and quality are retained and multiplied; all others are discarded without further trial.

After the obviously inferior grains have been discarded the product of the chosen centgeners is used to sow the multiplying plots. By this time the quantity of seed is sufficiently large to

separate compartment. This reduces the danger of loss from mice to a minimum and renders mixing impossible. If, at the conclusion of a five years' field test, any of these strains demonstrate their superiority over the parent variety we have in this reserve an absolutely pure supply of seed with which to sow a much larger field plot and thus enable us to make a dissemination of the new strain sooner than would otherwise be possible. Few strains are discarded in the multiplying plots; practically all that are entered are carried forward



*A view of some of the Cereal Plots at Macdonald College.*

enable us advantageously to seed the plots broadcast. The exercise of great care, however, is still imperative and necessitates sowing, covering, rolling, etc., by hand to avoid mixing. Likewise these multiplying plots, though frequently one hundredth acre in size, are cut with a sickle, threshed by hand in sacks and cleaned by a blast of air from an electric fan to ensure maintaining the highest possible standard of purity in each strain. The product of each multiplying plot is bagged separately and stored in metal seed cabinets in which each drawer has a

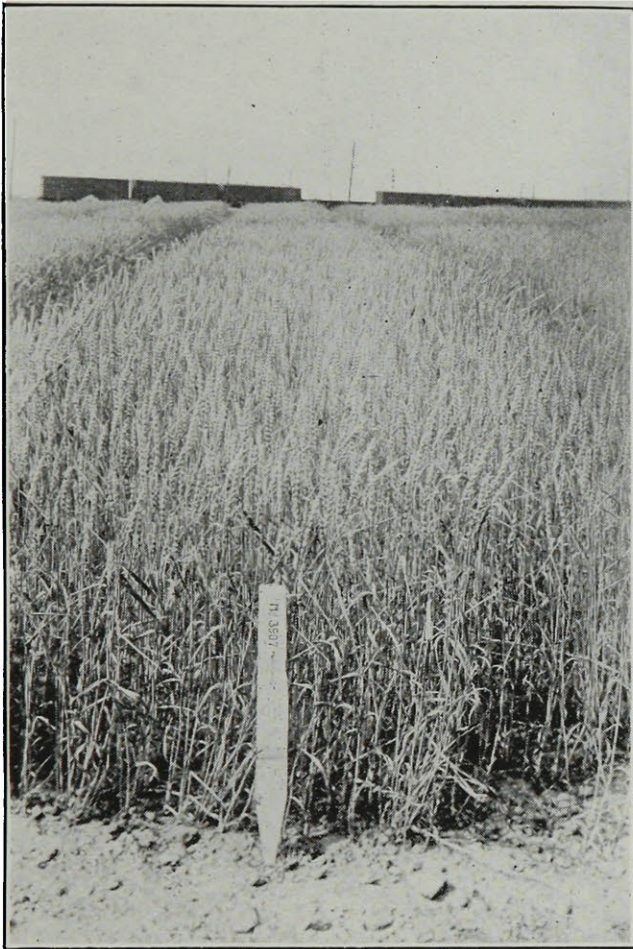
next year to the larger trials in the general field.

In the field test for new strains the plots are all one hundredth acre in size. Here the new pedigree cultures are subjected to the Station's final test. The new strains are sown beside the parent varieties and a five years' test is conducted to determine whether or not improvement has been effected. If sufficient advance in the desired direction has been made to warrant the placing of a new strain in commerce, sufficient land has been set aside to multiply these strains advantageously and so enable us



to make an early dissemination of the new strain.

Results of six years' work with the centgener system at Macdonald College are now available. Of the more than five hundred thousand single plants grown under control as previously des-



*A plot of pure line White Russian Wheat.*

cribed, only the best from the one hundred and sixteen thousand planted in the spring of 1907 have thus far been tested side by side with the parent sorts in one hundredth acre plots for three years. From eighteen of our

most productive varieties, representing four classes of wheat, three of barley and two of oats, fifty strains have been isolated, which, on an average of the past three years, have yielded from one to eight bushels per acre more than parent sorts grown beside them.

It is especially worthy of note that these average increases for three years were not obtained over the original, unselected parent stocks, but were obtained over original stocks which have, for the past six years, been subjected annually to the most careful hand selection of heads in the field and of grains in the laboratory.

Notwithstanding the rigorous selection described, we had under test in the field in 1912 two hundred and sixty-eight pure line strains.

While these results convey some idea of the possibilities in the centgener system, it is not to be inferred that there is no place for other systems of improvement. In the opening paragraph, attention was drawn to the fact that the three systems generally employed were, in reality, progressive steps leading up to the accomplishment of a desired result. Realizing this, and believing that results can be most economically obtained only when pure line foundation stock of known performance is utilized in cross-breeding, the Department did not begin the work of crossing until last year when its first pure, tested stocks were available for this purpose.

---

Before a rooster goes to bed,  
He winds up his alarm,  
For he must wake at three and crow  
To start life on the farm.

—The M.S.A.



## Helpful Agricultural Publications.



MORE than \$2,500,000 is expended annually by the Dominion Department of Agriculture in carrying on work in the interest of the farming community. This large amount of money is divided among several branches to carry on the special duties with which they are intrusted. The Experimental Farms seek to solve problems in all phases of agriculture, including grain growing, live stock husbandry, horticulture, apiculture, etc.; the Seed Branch works to encourage the use of only good seed; the Live Stock Branch endeavours to increase the profits of the stock raiser; the Health of Animals Branch aims to protect our herds and flocks from disease; the Dairy and Cold Storage Branch does much to help the dairymen and fruit growers, while the Tobacco Division endeavours to find out and teach which are the best kinds of tobacco and the best ways of treating the crop in Canada.

While all of us, unconsciously perhaps, reap benefits from this work, much of it, more especially that of an investigational nature, is useful only to those who learn for themselves the lessons from investigations that are carried on. By the use of reports and bulletins the several branches of the Department give out the results of their work so that all who wish to do so may profit by it. The publications are sent out to all persons who apply for them or to be put on the mailing list. In each case surplus copies are printed to meet the popular demand so as not to deprive any who desire to receive them. During the life of the Department these surpluses have been accumulating until there are available for distribution a greater or less number of copies of a large number of useful publications. A list of these including the latest bulletins has been compiled and printed in pamphlet form, copies of which are available to those who apply for them to the Publications Branch of the Department of Agriculture at Ottawa.

---

## FRIENDSHIP.

---

It is my joy in life to find  
 At every turning of the road,  
 The strong arms of a comrade kind  
 To help me onward with my load,  
 And since I have no gold to give,  
 And love alone must make amends,  
 My only prayer is:—"While I live,  
 God make me worthy of my friends."

—*Anon.*



J. R. MACFARLANE, EDITOR.

## Demonstration Orchard Work in New Brunswick.

By R. P. GORHAM, B.S.A., Assistant Horticulturist.



IN common with the other older provinces of Canada, New Brunswick has many old and neglected orchards that have received little or no care since they were planted. The greater part of these were planted between 1875 and 1890, the years when great interest was being aroused by the successes of Francis P. Sharp in the growing of apples. Numerous orchards were planted in different parts of the province but, lacking the proper care and cultivation such as Sharp gave, they soon fell into a condition of neglect. At the present time many of these old trees are a mass of dead wood and watersprouts, good as breeding places for insects and disease but not for production of fruit.

With the object of showing the farmers that, under proper management, these old trees could be made to produce profitable crops of fruit, three orchards were taken over by the Department of Agriculture in the spring of 1911. One of these was in York County, one in Sunbury County and one in Albert County, and each was fairly typical of the average old orchard in the province.

Work was begun early in April, when the orchards were pruned, the rough bark scraped off the trees and wounds resulting from sunscald and canker pruned out and painted. Then a dormant spray of lime-sulphur wash 1-9 was applied to destroy oyster shell scale, lichens and other growths. This was followed later by two more sprayings of summer strength with the addition of lead arsenate for the control of insects, just as the leaf buds were swelling, and just after the blossoms fell. In the Albert and York County orchards the sod was broken up and an application of barnyard manure turned under. In addition an application of commercial fertilizer was scattered broadcast and harrowed in. The Sunbury County orchard, being on intervale land, was not ploughed but dressings of manure and fertilizer given. In the others clean cultivation was kept up until June 25, when the land was seeded with cover crops of vetch and clovers. A strict account was kept of all materials used and labour applied and the whole charged up against the crop, as shown below in the account of the Sunbury County orchard.

EXPENDITURE

*Spring Operations:*

|                                                           |                |
|-----------------------------------------------------------|----------------|
| 6 days' pruning at \$2.00.....                            | \$12.00        |
| 2 days' scraping and painting trees.....                  | 3.00           |
| 1 gallon paint.....                                       | 2.25           |
| 2 days' hauling brush.....                                | 7.00           |
| 2 loads of manure applied.....                            | 3.00           |
| 180 lbs. superphosphate applied..                         | 3.50           |
| 10 bbls. dormant spray at \$1.65 applied.....             | 16.50          |
| 4 bbls. summer spray on Wealthy trees applied at \$1.22½. | 4.90           |
| 8 bbls. summer spray on Wealthy and Duchess.....          | 9.80           |
| Depreciation in spraying outfit..                         | 5.00           |
|                                                           | <u>\$63.95</u> |

*Harvesting:*

|                                                                               |                 |
|-------------------------------------------------------------------------------|-----------------|
| Wealthy—112 bbls. at 25c.....                                                 | \$28.00         |
| Picking and packing at 18c. per bbl.....                                      | 20.16           |
| Hauling to wharf at 2c. per bbl.....                                          | 2.24            |
| Duchess—100 bbls at 25c. per bbl.                                             | 25.00           |
| Picking and packing at 13c. per bbl.....                                      | 13.00           |
| Hauling to wharf at 2c. per bbl.....                                          | 2.00            |
| Interest at 6% on \$660, value placed on 1 2/3 acres of orchard by owner..... | 40.00           |
| Total expenditure.....                                                        | <u>\$194.35</u> |

REVENUE

|                                                       |                 |
|-------------------------------------------------------|-----------------|
| 84 bbls. Wealthy No. 1 at \$1.50 per bbl., f.o.b..... | \$126.00        |
| 28 bbls Wealthy No. 2 at \$1.00 per bbl., f.o.b.....  | 28.00           |
| 67 bbls. Duchess No. 1 at \$1.50 per bbl., f.o.b..... | 100.00          |
| 33 bbls. Duchess No. 2 at \$1.00 per bbl., f.o.b..... | 33.00           |
| Total revenue .....                                   | <u>\$237.50</u> |
| Expenditure.....                                      | <u>191.35</u>   |
| Net profit on 1 2-3 acres.....                        | <u>\$93.15</u>  |

Net profit per acre, \$55.89, which on a valuation of \$400.00 is a return of almost 14 per cent.

In 1912 these three orchards again gave large crops of fruit that on account of higher prices yielded a larger return than for the same quantities in 1911. Below are given the 1912 operations in the Sunbury County orchard.

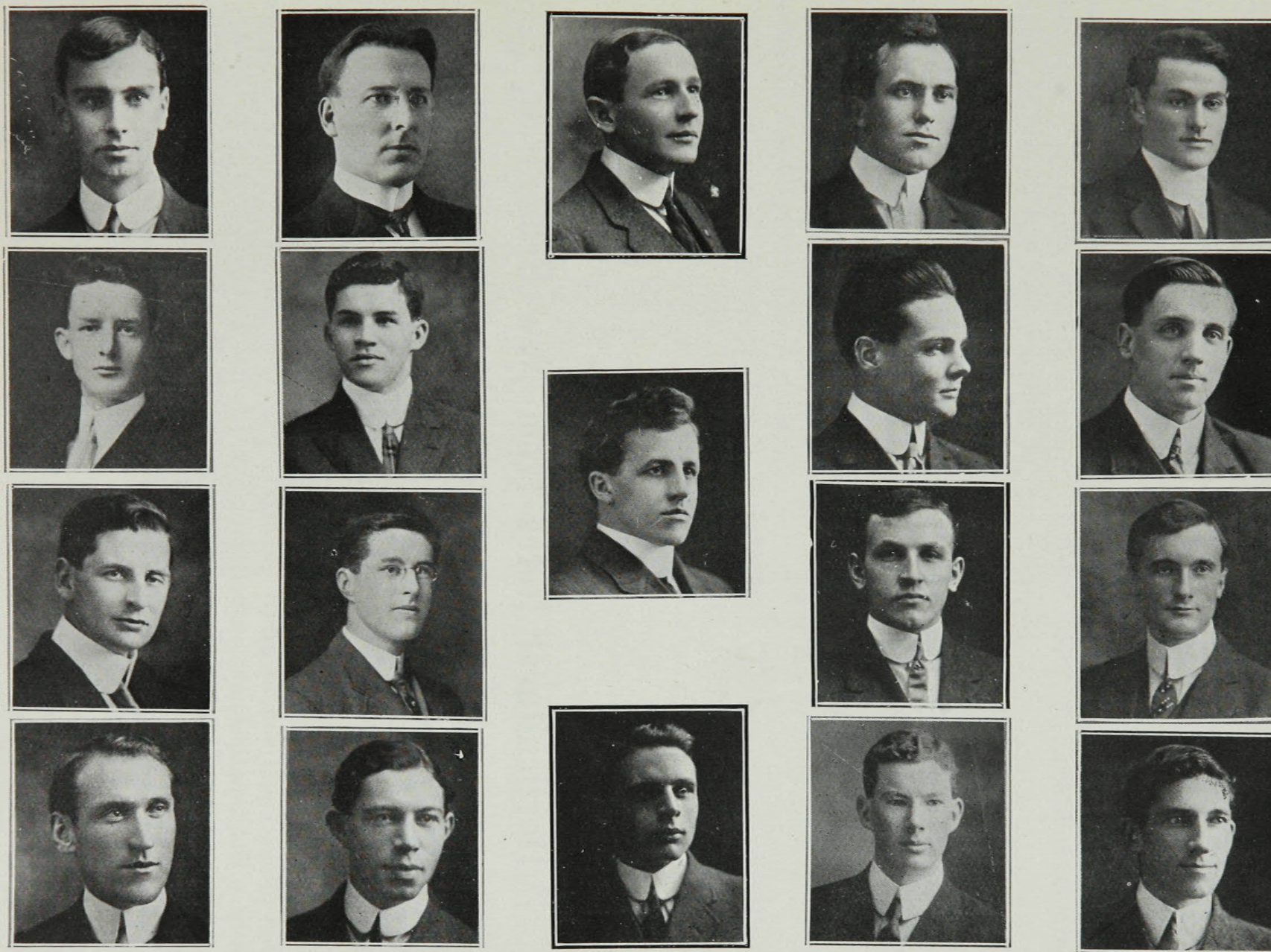
*Expenditure of Spring Operations:*

|                                                                  |                |
|------------------------------------------------------------------|----------------|
| 6 days' pruning at \$2.00.....                                   | \$12.00        |
| 1 day's scraping and painting at \$1.50.....                     | 1.50           |
| 1 gal. paint at \$2.25.....                                      | 2.25           |
| 1 day hauling bush at \$3.50.....                                | 3.50           |
| 12 loads manure applied, one half chargeable to 1913, at \$1.50. | 9.00           |
| 8 bbls. winter spray at \$1.54... .                              | 12.32          |
| 4 bbls. summer spray at \$1.12... .                              | 4.48           |
| Depreciation of spraying outfit                                  | 5.00           |
| Total. ....                                                      | <u>\$49.05</u> |

*Expenditure of Harvesting and Marketing:*

|                                                                                      |                 |
|--------------------------------------------------------------------------------------|-----------------|
| 338 bbls. at 25c.....                                                                | \$89.50         |
| Picking and packing 140 bbls. Wealthy at 18c.....                                    | 25.20           |
| Picking and packing 200 bbls. Duchess at 13c.....                                    | 26.00           |
| Picking and packing 18 bbls. Ben Davis at 18c.....                                   | 3.24            |
| Hauling to wharf 358 bbls. at 2c...                                                  | 7.16            |
|                                                                                      | <u>\$151.10</u> |
| Interest at 6% on \$660.00, value placed on the 1 2-3 acres of orchard by owner..... | \$40.00         |
| Spring Expenditure.....                                                              | <u>49.05</u>    |
| Total Expenditure .....                                                              | <u>\$240.15</u> |





AGRICULTURE, 1914.

Top row:—J. R. Macfarlane, Hamilton, Drayton, Husk, Durling.

Second row:—Fiske, Macdougall, Coffin, Hodge; Centre: Muir (President). Third row:—

## REVENUE

|                                   |          |
|-----------------------------------|----------|
| 84 bbls. No. 1 Wealthy at \$1.75. | \$147.00 |
| 56 bbls. No. 2 Wealthy at 1.25    | 70.00    |
| 160 bbls. No. 1 Duchess at 1.75   | 280.00   |
| 40 bbls. No. 2 Duchess at 1.25    | 50.00    |
| 13 bbls. No. 1 Ben Davis at 2.25  | 29.25    |
| 5 bbls. No. 2 Ben Davis at 1.75   | 8.75     |

|                       |          |
|-----------------------|----------|
| Total revenue ..      | \$585.00 |
| Total expenditure.... | 240.15   |

Net profit on 1 2-3 acres. ....\$344.85

Net profit per acre \$206.91, which on a valuation of \$400 is a return of almost 52 per cent.

## SUMMARY

## ALBERT COUNTY ORCHARD

|                                  |          |
|----------------------------------|----------|
| Net profit per acre in 1911..... | \$181.70 |
| Net profit per acre in 1912..... | 79.47    |

Average annnal profit per acre for two years is \$130.58, which on a valuation of \$500 per acre is a return of 26%.

## SUNBURY COUNTY ORCHARD

|                                  |          |
|----------------------------------|----------|
| Net profit per acre in 1911..... | \$ 55.89 |
| Net profit per acre in 1912..... | 206.91   |

Average annual profit per acre for two years is \$131.40, which on a valuation of \$400 per acre is a return of almost 33%.

## YORK COUNTY ORCHARD

|                                  |          |
|----------------------------------|----------|
| Net profit per acre in 1911..... | \$ 88.56 |
| Net profit per acre in 1912..... | 341.74   |

Average annual profit per acre for two years is \$215.15, which on a valuation of \$300 per acre is a return of over 72%.

## Horticultural Notes from New Brunswick.



**D**URING the past, apple culture has not been carried on to any extent in New Brunswick, and because of the lack of attention to orchards the general impression was that apples could not be grown successfully. The time has now arrived, however, when that opinion is entertained no longer.

Since the appointment of Mr. A. G. Turney as Horticulturist for the province, three years ago, a number of demonstrations have been carried on throughout the province, which show very clearly that old orchards, which hitherto have produced no marketable fruit, may be made to yield large quantities of high class apples when the proper cultural methods are practiced.

The success of these demonstrations has awakened the farmers to a realization of their possibilities as citizens of this province, and the result is that large numbers of trees are being set out. In the spring of 1911 it has been estimated that 60,000 apple trees were set out, while, in 1912, 30,000 were planted, and I believe that 20,000 is a fair estimate of what will be planted this spring.

Now that so many trees have been set out the question arises, how are the farmers to learn how to handle their orchards and care for their fruit? In answer to this question the Dept. of Agriculture at Fredericton planned a series of Short Courses in Fruit Growing to be held at various centres throughout the fruit growing districts of the pro-



vince. Notices were sent to the farmers asking if they could attend such meetings, and so anxious were they for the assistance offered that a schedule was prepared at once.

Eight representative places were chosen where meetings would be held, but upon request several other places were added to the list.



*Chrysanthemums in the Greenhouse.*

The courses were to be of two days' duration, with lectures on the most important phases of orchard culture, as, for instance, "The Outlook for Fruit Growing in New Brunswick," "The Packing of Apples in Barrels and Boxes," "Selection of Nursery Stock and Planting of Orchards." "The Fruit

Marks Act," "Insect and Fungous Pests of the Orchard, and Methods of Control." Other questions were also dealt with.

It is believed that better progress can be made in box-packing when one actually does the work himself, so as much time as possible was to be devoted to the practical side of the work, whenever possible a practical demonstration in pruning was to be given also.

The courses are under the direction of Mr. A. G. Turney, Provincial Horticulturist, assisted by Mr. R. P. Gorham, Agr. '11, Assistant Horticulturist; Mr. S. L. Peters, Dom. Inspector of Fruits for New Brunswick, and Mr. D. B. Flewelling, Agr. '12.

At the time of writing, courses have been given at ten different places, with two more still on the list. Mr. Turney has been unable to attend most of our meetings on account of the rush of business at his office in Fredericton.

A very interesting feature of the courses is the judging contest. A number of plates of different varieties of apples are arranged as found in exhibitions, and those present are requested to place them in order of merit, after an explanation of the points looked for by judges has been given.

A microscope, to show the spores of common fungous diseases, also features of insect life, was especially interesting, particularly to the school children who were invited when possible. The entire courses have been characterized by a deep interest being taken by all present, even old men, and the instructors feel that their time and labors have not been in vain.

D. BRUCE FLEWELLING, Agr. '12.



## Spraying the Apple.

By F. M. CLEMENT, B.S.A.



THE advances made within the last few years in the production of first quality apples have been largely due to the marked advances in the manufacture and application of insecticides and fungicides. Spraying, however, is not a new operation in fruit growing as it was practiced in a crude way hundreds of years ago, but spraying as it is understood by the best authorities to-day is a

applied by the skilled hand permits the tree to blossom and bear fruit without being attacked by enemies or to give the tree sufficient constitution and vigor to withstand their ravages or attacks.

The first link in the chain, or Link Number One, might be called "The Choice of Insecticide and Fungicide." A long article might be written on this and especially on Bordeaux Mixture compared to lime-sulphur in its various



*Scene in the College Orchards, showing Cover Crops.*

new thing; and not all fruit growers have yet realized or grasped the essentials. It is to some extent at least, to explain these essentials that this article is written.

Spraying is not simply putting a certain quantity of an insecticide or fungicide on a tree and later picking big red apples as the result, but it is one of the links in a chain which taken together and

forms as a fungicide; but it is quite generally accepted now that for this part of Eastern Canada, lime-sulphur in its various strengths is preferable. The choice of an internal insecticide seems to be between arsenite of lime and arsenate of lead; but since arsenite of lime cannot always be safely used with lime-sulphur on account of burning or injury and we have chosen that as our fungicide, we



must choose the latter, *i.e.*, lead arsenate. Experiments have already demonstrated this to be the safest poison for general use.

Link Number Two might be called "Preparing for the Spray." To combat any disease most easily and effectively it is first necessary to remove conditions that are causing that disease or to remove the patient to more congenial surround-

from the trunk and main limbs. In and around such places are to be found the breeding places of injurious insects.

Fungous diseases and especially Apple Scab and Ink Spot can thrive only under damp conditions. They do not thrive in sunlight or where there is a free circulation of air. Nature supplies sunlight and air, free, and in unlimited quantity, but without proper pruning, no tree can make



*Spraying Operations.*

ings. But in this case the patient cannot be moved, so if we are to obtain satisfactory results the surroundings must be made "horticultural." Remove or burn the old brush piles; cut the weeds and burn the dead grass and berry bushes along the fences; and if the fence is of wood and broken, have it repaired or reconstructed. With an old hoe without a handle carefully scrape the loose bark

use of them. Prune your trees well; open up the tops so that the sun on bright days will have shone on every leaf at some time during the day; remove old stubs and broken limbs and paint over the wounds with red lead so disease cannot penetrate. This will give the tree an opportunity to use nature's remedies to the fullest extent.

Link Number Three might be called

"The Application of the Spray." The first spray should consist of concentrated lime-sulphur of about 1.03 hydrometer test, specific gravity; or commercial lime-sulphur diluted about one to ten, applied to the tree while dormant. This may be anytime within about two weeks of the bursting of the first buds. Lime-sulphur of this strength must not be applied after the buds have burst.

The second spray should consist of concentrated lime-sulphur of about 1.008 or 1.009 hydrometer test or commercial lime-sulphur diluted one to thirty-five. To each forty gallons of this diluted spray is added from two to two and one-half pounds of lead arsenate and the whole applied when the blossoms of the earliest varieties are beginning to show pink at the tips.

The third spray should consist of a mixture similar to the second with poison in like quantity, but be applied immediately after the blossoms have fallen. This must be applied while the calyx ends of the apples are open and not two or three or even one day later. Neither must it be applied while the trees are in blossom.

These three sprayings might be considered general, and as such should be applied every year whether the trees are bearing a large or small quantity of fruit. They pave the way for future crops.

Other and later spraying may be considered as special and only applied when there is an outbreak of Codling Moth, Tent Caterpillar or Scab. In these cases the solution used for the second and third sprayings is recommended and

to it is added poison in like quantity. Apply the spray immediately there is any indication of an outbreak of any pest.

Remember that it is essential to use these sprays of the strengths indicated and at the times indicated. Twice the quantity of spray or an equal quantity of twice the strength applied at other times than indicated will not give equally good results. Follow the instructions in detail and do the work thoroughly. If any portion of the tree is left uncovered with the spray it only acts as a breeding ground to again spread disease.

Link Number Four might be called "Guarding against Selfishness." It is the work of the tree to produce seed in large numbers and this it will endeavor to do at the expense of a fewer number of seeds or fruits larger and better developed. The aim of every plant in nature is to reproduce itself at the expense of some other plant. Guard against this overproduction by hand thinning if necessary. Do not leave the apples touching each other any more than can be helped, and the specimens will be larger and more highly colored. At the same time if the tree is so treated it will have an opportunity to produce fruit buds for the following year.

And lastly, cultivating, fertilizing, and cover-cropping judiciously may also be considered links in the chain, but as we are dealing only with spraying at this time they may be safely left for the reader to weld together and apply to aid in producing the greatest quantity of fruit of the highest quality yearly.

---



## Macdonald Horticultural and Apicultural Club.



ON January 20th, the Horticultural and Agricultural Club met in the Pomology room of the Horticultural building to listen to an address on "The Planting of an Apple Orchard," by Prof. Bunting.

Prof. Bunting, in a very clear manner, explained the different methods of planting an orchard. These methods were well illustrated by views of young orchards, which were passed around for the audience to inspect.

The danger of planting fruit trees carelessly and too close together was discussed in detail. As a rule, too little attention was given to having the trees planted in straight upstanding rows; this neglect not only detracted from the appearance of the orchard, but made cultivation more awkward and difficult.

The care of the young orchard was very important, especially during the first year. Good cultivation was essential to get strong and vigorous growth, and, on the other hand, whenever a cover crop was planted in the orchard, it should never be cut and taken off the land, but should be allowed to remain in the orchard to supply plant food for the trees.

The selection of suitable varieties of fruit trees was to be well considered before setting out an orchard; care must be taken to select varieties that are known to do well in the locality where the orchard is to be planted, and to

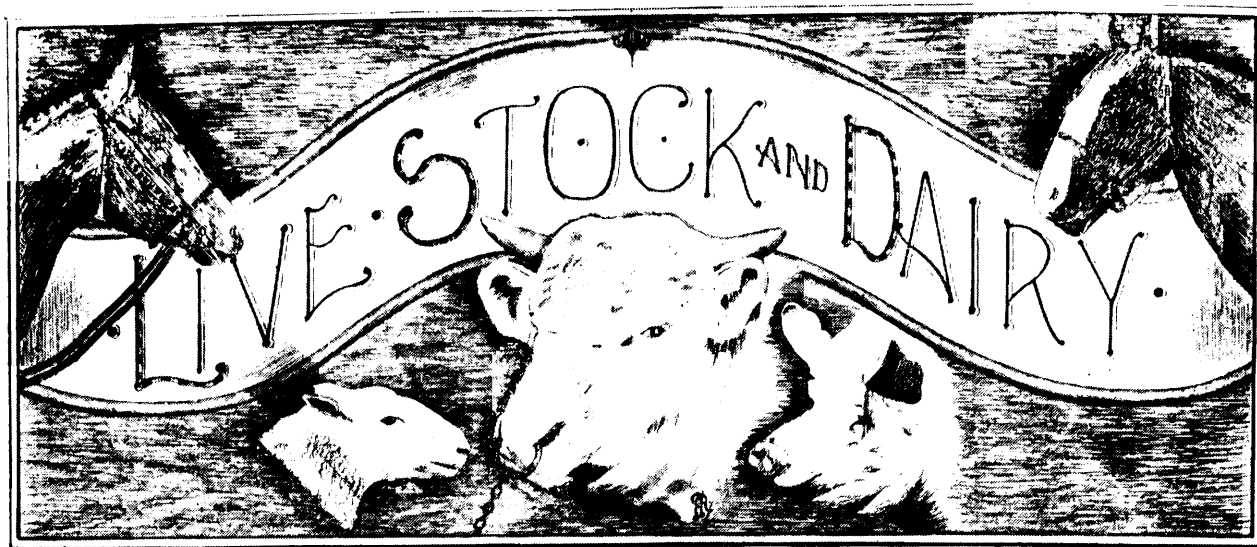
secure varieties that will come into blossom about the same time, so as to insure good cross pollination.

Prof. Bunting ended his address by pointing out some of the benefits that could be derived through co-operative societies in relation to the cost of production, handling and selling of fruit.

The Club again met on February 17th, in Room 107, Main Building, and was addressed by Mr. F. C. Clement. The subject for the evening was "The Difficulties Confronting a District Representative." Mr. Clement explained that the work of the District Representative was very varied, and all present at the meeting were thoroughly convinced, after Mr. Clement's interesting and humorous talk, that in order for a man to be qualified to carry on District work, he must be nothing less than a "walking encyclopedia" in order to perform successfully the many duties which the people of his community expected him to do.

The next meeting of the Club took place in Room 48, Biology Building, on March 7th. Mr. F. L. Sladen, Assist. Apiculturist for the Dominion, gave an illustrated lecture on "Honey Bees." Their life history, habits, and their economic importance to the farmer were thoroughly discussed. During the lecture, the lantern slides that were shown helped greatly in depicting some of the points brought out by the speaker.

W. A. M., '13



W. L. MACFARLANE, EDITOR.

## The Sheep Industry in Quebec.

By A. A. MACMILLAN, B.S.A.



HERE is no domestic animal that is so gentle and inoffensive as the sheep. They are admired by all. Sheep are easy to enclose, easy to handle. A small amount of capital is required to establish a good flock. They give quick returns, require little labor, and the buildings need not be expensive. They add fertility and beauty to every farm on which they are kept. In spite of these facts, however, the sheep industry, especially in Quebec, has not attained the prominence that it should. No province in the Dominion is more admirably situated climatically and geographically for the production of excellent flocks. The province abounds in areas of flat and rolling lands in close proximity. The farms are so laid out that in a great many cases the land varies from flat level portions in front to rolling hilly land further back. This condition is ideal, providing a variety of herbage and tending to produce hardiness. The winters, although rigorous,

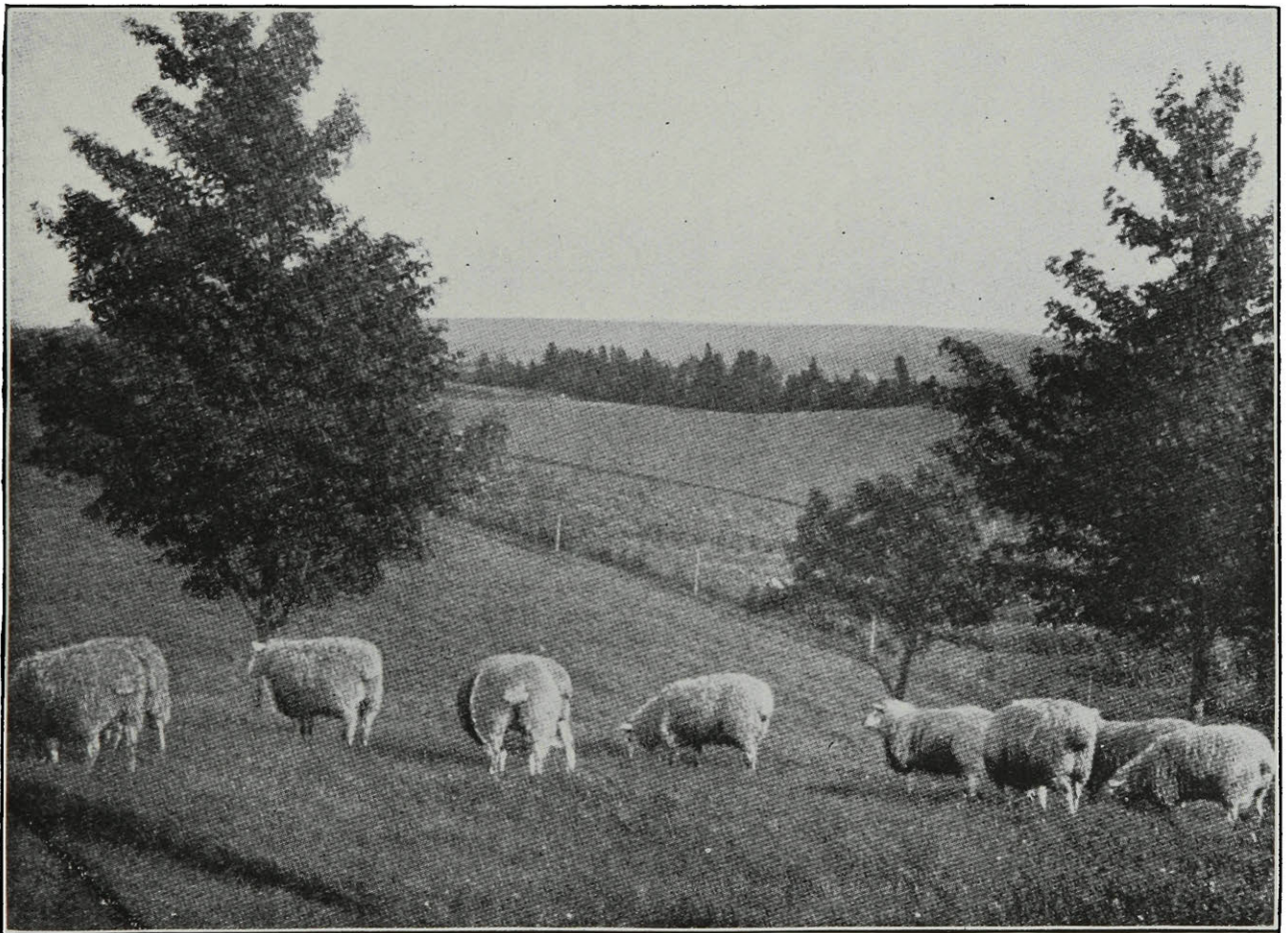
are not too severe, and an excellent quality of wool can be produced.

Ontario has become famous for the production of pure bred sheep of excellent merit, and it is deplorable that Quebec, even more favorably situated, has not made the progress it should in the raising of sheep. Several factors probably account for this, and first and foremost among them, perhaps, is the dog nuisance. Dogs are one of the worst enemies of sheep, and a few minutes' work by one or two curs will ruin a flock that has been the result of years of grading and selection. This nuisance can only be overcome by the combined effort of farmers to enact and enforce legislation that will successfully remove the danger of this pest.

The low price received for wool is another serious drawback to the sheep industry. The practice of tub-washing, handed down from the time when local woollen mills were prevalent throughout the province, has instigated the method of buying wool on the washed basis.

This method of buying makes no discrimination for quality in the fleece. Long, short, white, black, crimped, uncrimped, good quality and inferior quality wools are all bought on the basis of weight. This crude method of procedure has resulted in a great discount on Canadian wool on foreign markets, and while Quebec alone is not to blame for improper methods of grading, yet she along with the other provinces receives a comparatively low price for her wool.

kets of Montreal will reveal the scarcity of mutton. Prices are exceptionally high for all grades. In recent years, with the growth of our cities, a growing demand has sprung up for the production of baby mutton. This trade offers remunerative returns but the supply is not equal to the demand. In addition to home consumption, the prairie provinces which have been rapidly becoming settled, and which up till the present have been concerned with the produc-



*A Flock at Pasture.*

The various factors that have entered into the decline of the sheep industry in the province are numerous and it is impossible to enumerate and calculate the exact share each particular factor has played. The fact however remains, that through lack of interest in sheep raising, the province has ceased to supply enough mutton for home consumption. A glance through the mar-

tion of wheat, are now rapidly inaugurating a system of mixed farming. In the near future our Western provinces will require large numbers of breeding stock.

The situation is indeed promising. Already farmers are turning their interest towards the sheep. Quebec along with Ontario must take a share in providing breeding stock for foundation flocks throughout the Dominion as well as



supplying the mutton trade in large cities at home.

The great advance which undoubtedly will take place in the sheep industry in the near future makes the question of breed an important one. If Quebec is to become famous as a producer of sheep, co-operation on the part of sheep breeders is necessary. Organization in any industry is necessary for success. Quebec undoubtedly can produce several breeds successfully and some sections will be more favorable to one breed than another. However, it should be the aim of the province to select one breed which gives promise of being the most suitable

to the climate and topography of the province. Once this breed has been found and proved itself adequate, all others should be eliminated as far as possible. Careful selection, breeding and grading, and feeding will, in time, give uniformity and excellence to the sheep within the province. Co-operation in breeding, feeding and selling will ensure the highest selling price for the flock. Organization stimulates interest and ensures the success of the industry. Let these two factors be the watchword of breeders, and may the day soon arrive when sheep will be a source of much revenue to the farmers of the province.

## Care and Management of Show Dairy Stock.



PROBABLY no line of live stock requires more care and attention than do dairy cattle in preparation for exhibition purposes. To be a successful exhibitor, one requires more than average intelligence. First, he must be a good judge, and second, he must have a knowledge of feeding and the laws of breeding. Such work necessitates a great deal of time and forethought, and sometimes years to accomplish anything like ordinary success.

### CARE OF THE STOCK.

In the case of dairy cattle, selection of show stock must be made the year previous to exhibiting, because to have them in the best bloom it is essential to have them bred to freshen about one week before exhibition. During the winter months the stock should receive careful attention and be kept in good

condition. Feed judiciously with such feeds as bran, and a mixture of oats, barley, corn and a little oil meal. In the line of roughage, they should have good alfalfa or clover hay with silage and roots, if possible. In summer, the very best pasture should be reserved for the show bunch, so that when turned out in spring they will retain their good condition until such time as they are brought into the stables for the final polish before starting out on the show circuit. To obtain best results it is necessary to house the cattle at least two months previous to exhibition time. This allows the stock to become accustomed to the change of conditions in feeding, and it also enables the exhibitor to devote his whole attention to the final preparation. When in the stables, pasture should be substituted by green feeds such as corn, alfalfa and clover, with a light feed of

concentrates, gradually increasing the concentrates towards the end of the finishing period.

Light blankets should be used up to within three weeks of exhibition, when frequent washings should be practised with heavy blanketing, this effecting a beautiful, soft, mossy appearance to the skin and coat of the animal.

the earnest endeavour of the exhibitor to win. After the cattle are well rested they should be thoroughly washed and heavily blanketed.

Care, too, must be exercised in the feeding. It is not a wise policy to feed too heavily nor allow too much water previous to the morning of judging. Then they should have access to all they



*Steer from a dual-purpose Shorthorn Cow.*

#### TRANSPORTATION.

In transporting stock to and from the exhibitions, it always pays to have the cars properly fitted to ensure the best comfort of the cattle. After arriving at the exhibition grounds the next trouble confronting the exhibitor is that of good stabling. When comfortably stabled, it is always advisable to allow the stock to rest about twenty-four hours. From this point on it should be

will eat, especially green feeds such as corn, alfalfa, clover and roots together with plenty of water. Before entering "The Ring" to be judged the blankets should be removed and the animals well groomed, finishing with an oily cloth, this gives a nice glossy appearance to the animal.

The work of the ambitious exhibitor is always crowned with success.

W. H. GIBSON, '13.



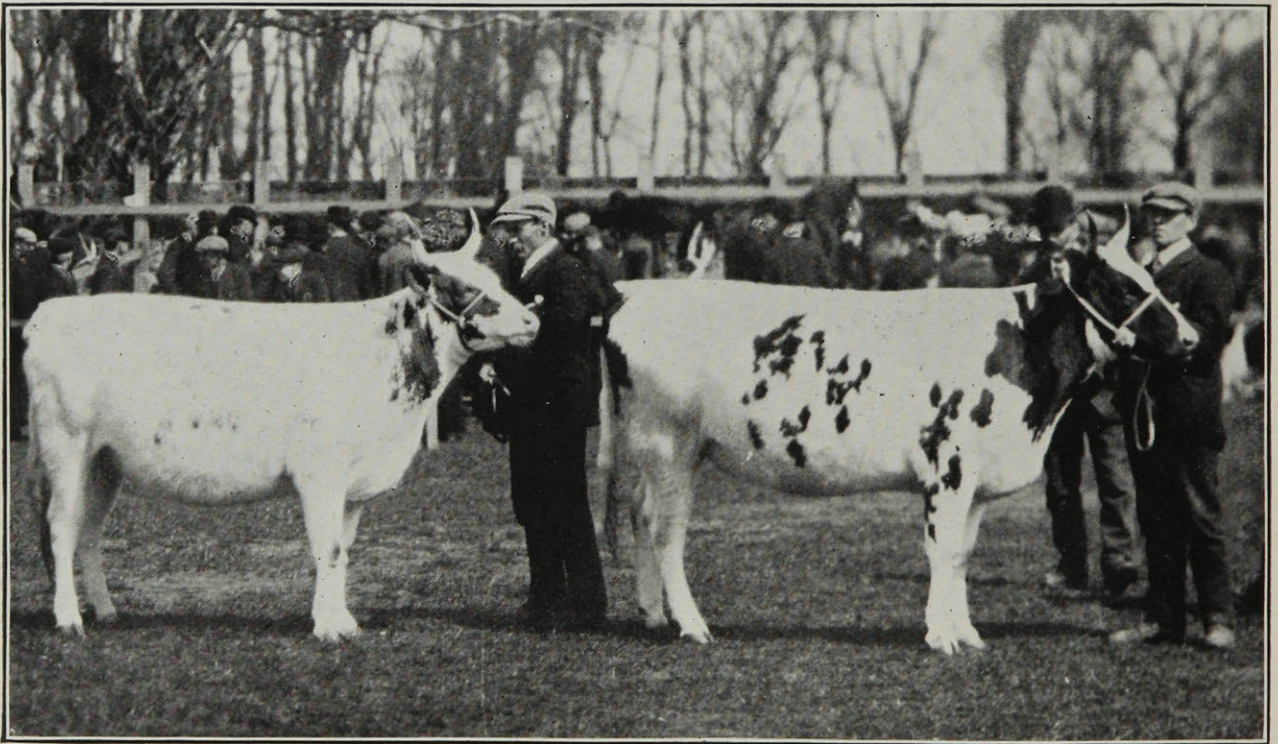
## Conditions Prevailing at County Fairs.



ARE our exhibitions proving their worth in the line of improving and developing our live stock interests?

To a limited degree, they are, but only for the large breeders and importers of live stock, consequently, the smaller breeder has to revert his efforts towards the smaller and more insignificant shows. This seems an unfair deal to the small but progressive

Since our larger fairs at Toronto and Ottawa are doing much for the improvement of live stock, let us revert to the county fairs and see what they are doing. Are they improving the live stock conditions of our country? I fear the answer is in the negative. To realize the adverse conditions of such fairs, one has to be on the judging circuit for a year or so. In the first place, there is lack of management, and secondly, im-



*Prize Winners at Ayr, Scotland. (Note the condition.)*

breeder. Some special provision should be made by the large Fair Boards whereby the smaller breeder could exhibit and yet be exempt from competition with the larger breeders and importers. Such an opportunity would tend to stimulate and encourage the exhibition of more home bred animals, it would also tend to bring the owner and exhibitor into the lime light as a breeder.

proper classification of all animals. As a rule they are able to distinguish between the different breeds of cattle; in horses all breeds are usually thrown in together, regardless of size and weight. Such work gives the judge a great deal more work to do. The same may be said about the sheep, swine, and all cereals and horticultural exhibits. To cite one instance in the case of sheep, I have seen a Shropshire sheep in the



Leicester class with the name Leicester tagged on its wool.

From the foregoing it will be seen that the task of the judge is a difficult one. No matter what a judge's ideals may be in regard to the different classes of live stock, when such conditions confront him as are usually met with at county fairs, they have to be modified and remodified at every fair which he attends. If the judge was to adhere to his ideal type, most of the animals on exhibition would fall far short. Probably about 50% are non-descripts, scrubs with no breeding, and should not be allowed in any show ring. The judges at the county fair are, as a

rule, sent out by the Provincial or Dominion Government and are expected to be able to pass on any class of live stock, even to dogs, as the writer did on one occasion.

Conditions prevailing at county fairs are by no means the most favourable to the best interests of live stock and agriculture in general. Especially is this true in the Province of Quebec. However, I have little hesitation in predicting that in the near future, when Macdonald sends out her budding young agriculturists, such conditions will no longer prevail.

W. H. GIBSON.

---

## Animal Husbandry Club Notes.



At the beginning of the present College year, all those students especially interested in Animal Husbandry joined the ranks of the Club's membership, and elected an Executive Committee for the term.

The object of this Club is to provide means whereby all those interested in live stock may meet and discuss various phases of the industry not taken up by the regular College course. The services of experts in their various lines of work are secured to address the members of the Club at various times throughout the year.

The following is a brief summary of the different topics discussed during the year and the names of the men to whom we are indebted for these interesting and educative addresses.

The first one was an address from Prof. Barton, on the evening of October 22nd, 1912. Subject, "Live Stock Conditions in Great Britain." As he had just returned from a visit to the Old Land, his remarks on the subject were much appreciated by his hearers, and should be decidedly profitable as well, if followed out.

On Nov. 11th, the members were favoured by addresses from Messrs. W. J. Reid and A. R. Ness, of the Animal Husbandry Dept., Macdonald College.

Mr. Reid dealt with the Sheep Industry in its various forms, and outlined the most approved methods of breeding, feeding and marketing sheep. He also pointed out that the future of the industry is bright.

Mr. Ness spoke on the "Value of Pedigrees and Prize Winning Records of some

of the most famous Clydesdale Sires," and showed that a large part of the famous horses of to-day were direct descendants of famous prize winners.

The third meeting was held on Jan. 13th, 1913. Speaker of the evening was C. M. MacRae, of the Dept. of Agriculture, Ottawa. Subject, "Horse Breeding in Canada." Mr. MacRae gave a general address on the subject, and emphasized the large demand that exists at the present time for draught horses of the approved type.

On Feb. 11th we were favoured by an address from D. Drummond, of the Dept. of Agriculture, Ottawa, on "Care and Management of the Dairy Cow." The speaker left with us the impression that the great object to keep in mind is the necessity of breeding dairy stock that

can convert foods into milk at a low cost for production of the same. Other important factors mentioned were that of keeping milk records of cows, and of proper care and feeding of calves and young stock.

On March 18th, J. H. Gunn, of Gunn, Langlois, Ltd., Montreal, gave a very interesting address on the "Handling of Meats and Meat Products," using a side of first-class meat and one of inferior quality as a means of demonstrating the great difference in the amounts of valuable cuts of meat in the first class one as compared with the one of inferior quality.

We trust his remarks on this subject will be the means of causing us to try to produce better beef, and more of it, when leaving college.

---

## APOLOGIES TO TENNYSON.

---

Broke! Broke! Broke!

Without a cent, O see!

And I would that my tongue could  
utter

The thoughts that arise in me.

O well for the millionaire's boy

That he talks to the girls every  
day!

O well for the Minister's lad

Who sings in the choir, they say!

And the stately time goes on

Till the thought of it gives me a chill;

But O for the touch of a silver coin,

And the sound of a crisp dollar bill!

Broke! Broke! Broke!

At the first of the year, O see!

But the tender thoughts of a bill that is  
gone

Won't bring it again to me.

—G. H. in *Stanstead College Magazine*.



## Death of Dr. De Laval, Inventor of the Cream Separator.



CHARL Gustaf Patrik De Laval, known throughout the world as the inventor of the cream separator, died on February 3rd, in Stock-

separators and as the founder of the cream separator concern which bears his name.

His activities, however, were by no means confined to the development of the cream separator. He was one of the most prolific and versatile of the world's great inventors, and in addition to his invention of the first continuous cream separator he achieved notable success in various other fields of scientific endeavour and practical usefulness.

Few men have conferred more lasting benefits upon mankind than Dr. De Laval. The cream separator and the milk tester, both conceived by him, though further developed by others, have alone saved billions of dollars to the world's dairy interests and largely made possible the wide use of dairy products as we know them to-day.

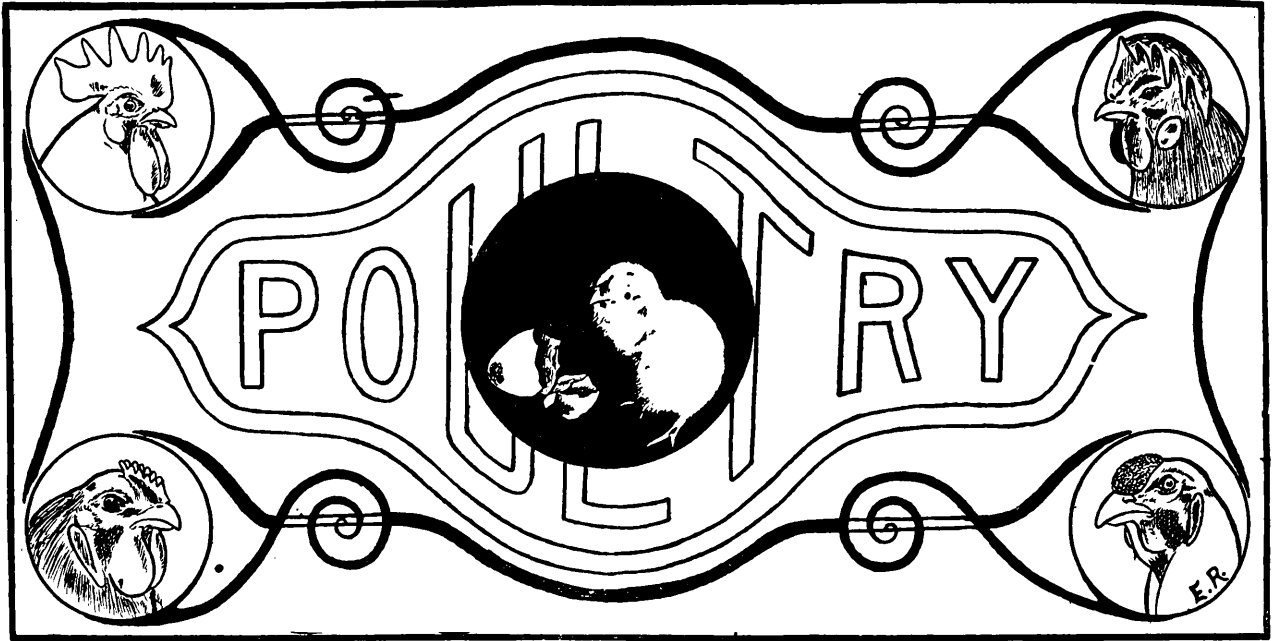
Dr. De Laval well deserved the comparison so often made of him with our own great Edison. As the inventions of Edison have made possible the tremendous advance in the development of electricity and its practical application, so dairy machines invented by Dr. De Laval have made possible the equally wonderful progress in the last 25 years in the field of dairying, and Dr. De Laval has rightly been called "the Edison of dairying."



*The Late Dr. De Laval.*

holm, Sweden, his native city, at the age of 67 years.

Dr. De Laval was best known to fame for his invention of centrifugal cream



A. G. TAYLOR, EDITOR.

## Spring Problems in Poultry.

By S. A. BERGEY, B.S.A.



THE problems of the poultry business may seem to many to be comparatively simple. The smaller your flock the simpler your problem and the larger the flock the more complex it becomes. The time is past when every one who manifests a liking for poultry is considered and called a "crank." The modest little hen, to a great extent neglected and left to hustle for herself in the past, has at last won the admiration and attracted the attention of the world.

Now, while to be successful with poultry there are problems to be solved at all seasons of the year, there is no time when good judgment is more telling than in the spring.

In the spring of the year we make up our breeding pens. This should be done early in the season. Factors affecting success in incubation, whether you use hens or incubators, begin before the eggs

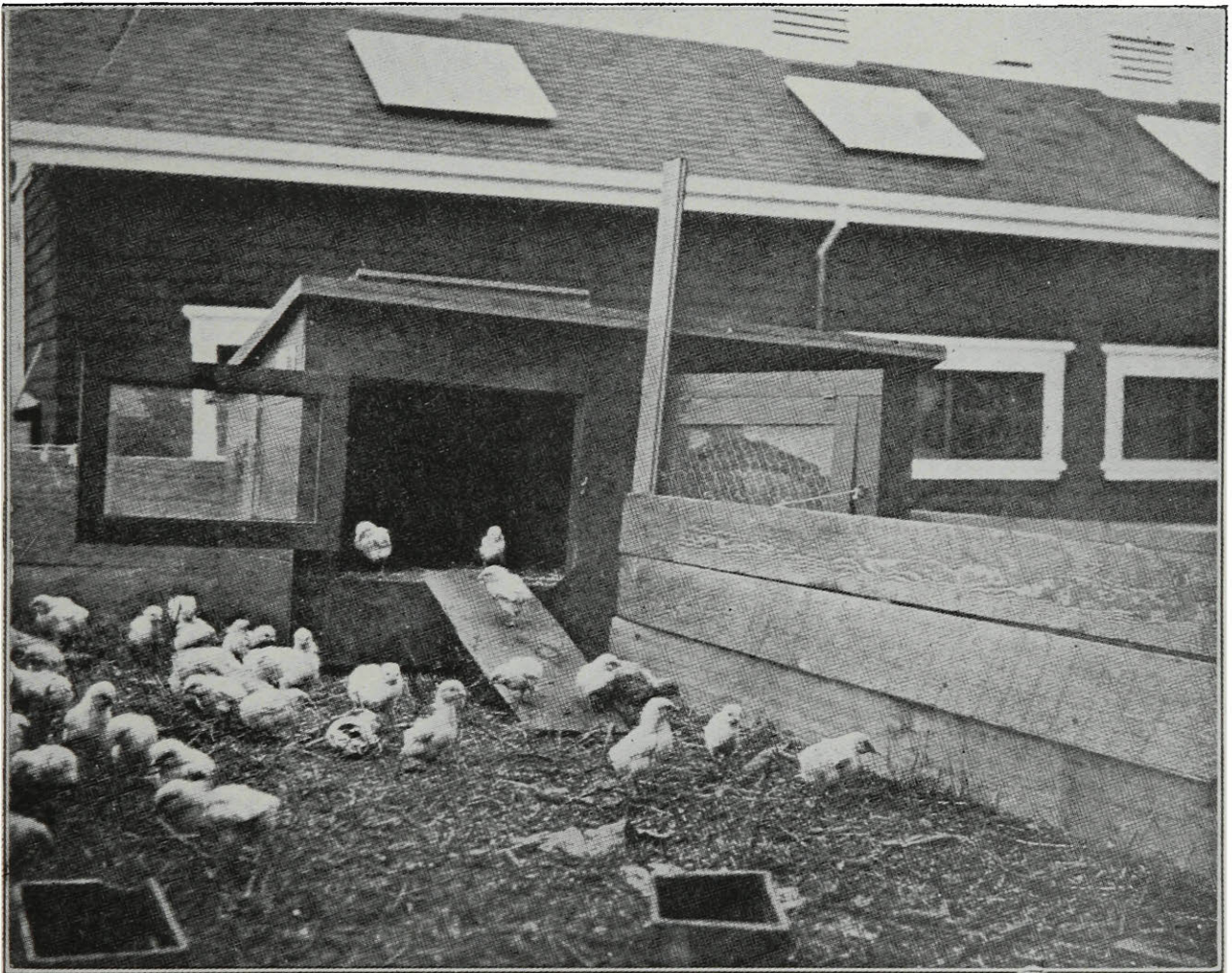
are laid, and the most common cause of poor results in incubation is the use of eggs of low vitality. In order to have any degree of success in incubation the eggs must be from stock of high vitality and strong robust constitution. The neglect of any of the factors affecting the health of the flock, such as poor housing, improper foods and feeding, may greatly impair the vitality and health of the offspring. The breeding pens should be made up in February or during the first two weeks in March, and too much care cannot be exercised in your choice of the male bird. Since his influence is so great he should be well developed. Diseased or unhealthy birds should never be used in the breeding pen. The male bird should be active, masculine, a bird of quality, and possess an abundance of vigor and vitality. These general characteristics may also be applied to the female. We are often inclined to breed from small, immature, or stunted



females. One- or two-year-old hens should be used as breeders. Very often it is almost impossible for a farmer to separate his hens from his pullets, but this should be done as far as possible. Pullets should not be used as breeders unless absolutely necessary and then only for one year. Many times has the vigor of the flock been considerably re-

#### INCUBATION.

Whether it will pay to buy incubators or brooders depends largely on one's circumstances. Where chicks are wanted in considerable numbers before April 15th, an incubator becomes practically a necessity. Again, when over one hundred and fifty chicks are wanted, an incubator is in many cases cheaper and



*Colony Brooder for Newly Hatched or Growing Chicks.*

duced by breeding from pullets year after year. Breeders are beginning to realize the necessity of breeding from fully-matured, well-developed fowls if vitality, vigor and prolificacy are to be maintained. Generally speaking, about ten to fifteen females are sufficient for one male in the heavier breeds and about ten to eighteen with the lighter breeds.

better than the natural methods. It is also necessary where one is breeding from the non-setting breeds.

#### NATURAL INCUBATION.

In setting the hen, it is generally agreed that in order to get a good hatch she must be placed where other hens are not likely to disturb her. Get a box



about twelve inches square and six inches deep; put some earth or an over-turned sod in the bottom, taking care to have the corners well filled so that no eggs can roll out from the hen and get chilled; next, put in about two inches of straw or chaff; put the nest in some pen where nothing can disturb the hen and put the hen, after dark, on only a few eggs. Feed and water must be within easy reach and a dust bath should also be convenient. If the hen is sitting quiet the next day you will be safe in placing the eggs under her. About fifteen eggs are sufficient for each hen. It should be remembered that the hen will be in better condition if dusted with insect powder when set and also a few days before the hatch comes off. This will usually keep the lice in check, especially if some tobacco leaves or tansy leaves are used in making the nest.

#### ARTIFICIAL INCUBATION.

There are many makes of incubators that do fairly good work. They are not perfect, nor have they the hatching power of a normal hen, but they are always ready to hatch, providing the operator does his part; they do not cease hatching as some hens do. When buying a machine, get one that is well built, double cased, and that is easily kept clean, with its fixtures such as lamps, etc., conveniently placed.

When starting the machine wash it clean and better disinfect with a ten per cent solution of creolin or zenoleum as it has been found that disease germs in incubators do serious harm. In operating the machine follow closely the manufacturer's directions. The hatch is made or lost usually during the first week of incubation. Keep the temperature well up to 103 degrees F., with the thermometer lying on the eggs, and maintain as even a temperature as possible. Do not

set dirty, washed, small or extra large eggs. An egg shell is porous and disease germs that may be on dirty eggs might infect a number of those surrounding it. Do not turn your eggs when your hands are dirty or after handling lamps or kerosene.

The room in which the incubator is placed should be clean and well ventilated. If possible select a room that varies very little in temperature and that is free from foul odors.

#### REARING CHICKENS.

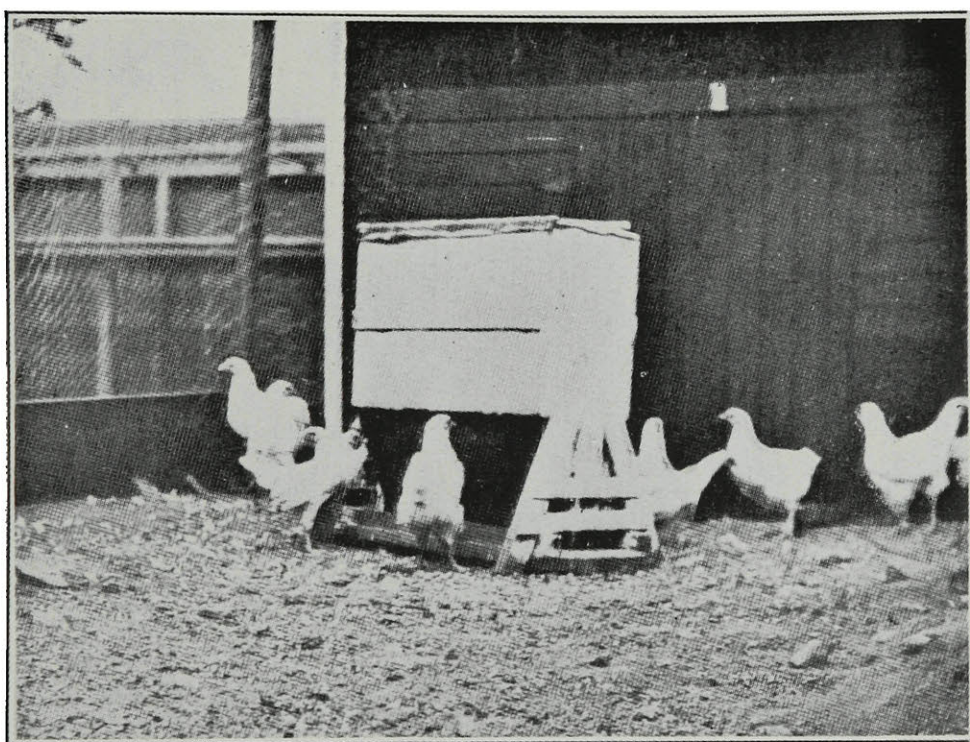
Chickens, in order to do their best, should require to be reared on fairly good land, clay or sandy loam being the best. Chickens require dry ground at all times, yet at the same time a rather moist spot near by provides a good foraging ground. Young chickens require plenty of ground to range over; some convenient shade, such as fruit trees or growing corn, tender green food and insects. Many growers of large numbers of chickens on limited areas crowd their birds far too much, the result being a large number of unthrifty chicks. The chicks very frequently outgrow this unthrifty condition, but it is easily noticed when they are about half grown. Many people believe, or at least appear to believe, that so long as a chicken is alive it is a good one, but this is a mistake, and the writer believes that by breeding from such stock the vitality will gradually decrease until we shall reach a point where eggs are almost unhatchable.

Chickens when taken from the nest or incubator should be placed on fresh soil on which no other chickens have ranged that season. The range or run need not be large, but it should be fresh. Avoid an old sod as the grass is too tough for the chickens. After the middle of May, or perhaps a little later, depending on the season, the cultivated land gives

better results than grass land. A corn field, well cultivated, seems to be nearly an ideal place for raising late-hatched chicks. Chickens hatched with an incubator can be reared either with hens or with a brooder. The best plan I know of to get the broody hen to take the chicks is to give the hen a few of the eggs from the incubator about the eighteenth day and allow her to hatch them. When your incubator hatch is over take a dozen or fifteen chicks and put them under her after dark. Even if they happen to differ in color from those she

placed in a small portable house it is a good plan, as the brooder is thus protected from storms and cold winds in the early spring and also from the heat later on. This house also protects them from rain, etc., and serves as a roosting coop after they become too large to need artificial heat.

Chicks should not be fed until they are at least 36 hours old. Do not feed them any sooner as it may cause indigestion and bowel trouble. The temperature of the brooder should be from 90-95 degrees at the chick level throughout the



*Hopper used in Feeding Dry Mash or Grain.*

has hatched, she will mother them all the same. If you give them to her in the day-time she may not do so. Never neglect to give the hen a thorough dusting before giving her any eggs. If there is one thing more than another that requires careful attention in rearing young chickens it is to keep them free from lice. If lice get upon them from the hen or elsewhere a large proportion will be almost sure to die.

There are a good many good brooders on the market. If the brooders can be

first week. Gradually lower the temperature of the brooder one degree a day, and remember that every fifteen chicks will raise the temperature of the brooder one degree. Be careful not to get the chicks too hot or too cold as extremes cause trouble during the first ten days.

The floor should be covered with a few inches of chaff or cut straw. Lukewarm water should be provided as a drink. Start feeding your chickens on hard boiled eggs finely chopped, shell included, and bread crumbs, about four



parts by weight of bread to one of eggs. This is fed dry. After the first few days give them an occasional feed of chick feed which is made up as follows:—

|                           |         |
|---------------------------|---------|
| Cracked Wheat . . . . .   | 3 parts |
| Granulated Oatmeal . . .  | 3 “     |
| Finely Cracked Corn . . . | 3 “     |
| Grit (chicken size) . . . | 1 “     |

This can be used from the start and continued throughout the first eight to ten weeks with good results. Feed chicks about five times a day. Feed about three times per day of chick feed, once with bread and milk, and one of mash made of equal parts of bran, shorts and cornmeal to which has been added ten per cent of animal meat or blood meal. Scatter this chick feed in the chaff and the little chicks will work away most of the day for it. This gives them the exercise which is necessary. If there is no green food within reach it must be supplied. Sprouted oats are good, as is also lettuce and cabbage, etc.

When the chicks reach about eight weeks of age, feed only three times per

day. When they are hatched at a season when they can range out of doors they need not be fed as often or as carefully as described above.

Where chicks have good range it is well to use the hopper plan of feeding after they are about three weeks old. Hoppers may be made of any size or shape so long as the supply of grain is constant and the supply large enough to last a week or so. A hopper which slopes from both sides gives better results than one sloping only from one side. Where the hopper plan is adopted the labor problem is very much reduced. Give them a supply of fresh water daily. If you wish to force your chickens it would be well to give mash twice a day with a little more animal meal added.

Keep them going nicely in this way and separate your males from the females as soon as the former begin to domineer over the latter. In this way your males will do better and also your females will do better. If this method is followed and your stock is from good strong sound parent stock you should have your pullets well matured at six months of age.

---

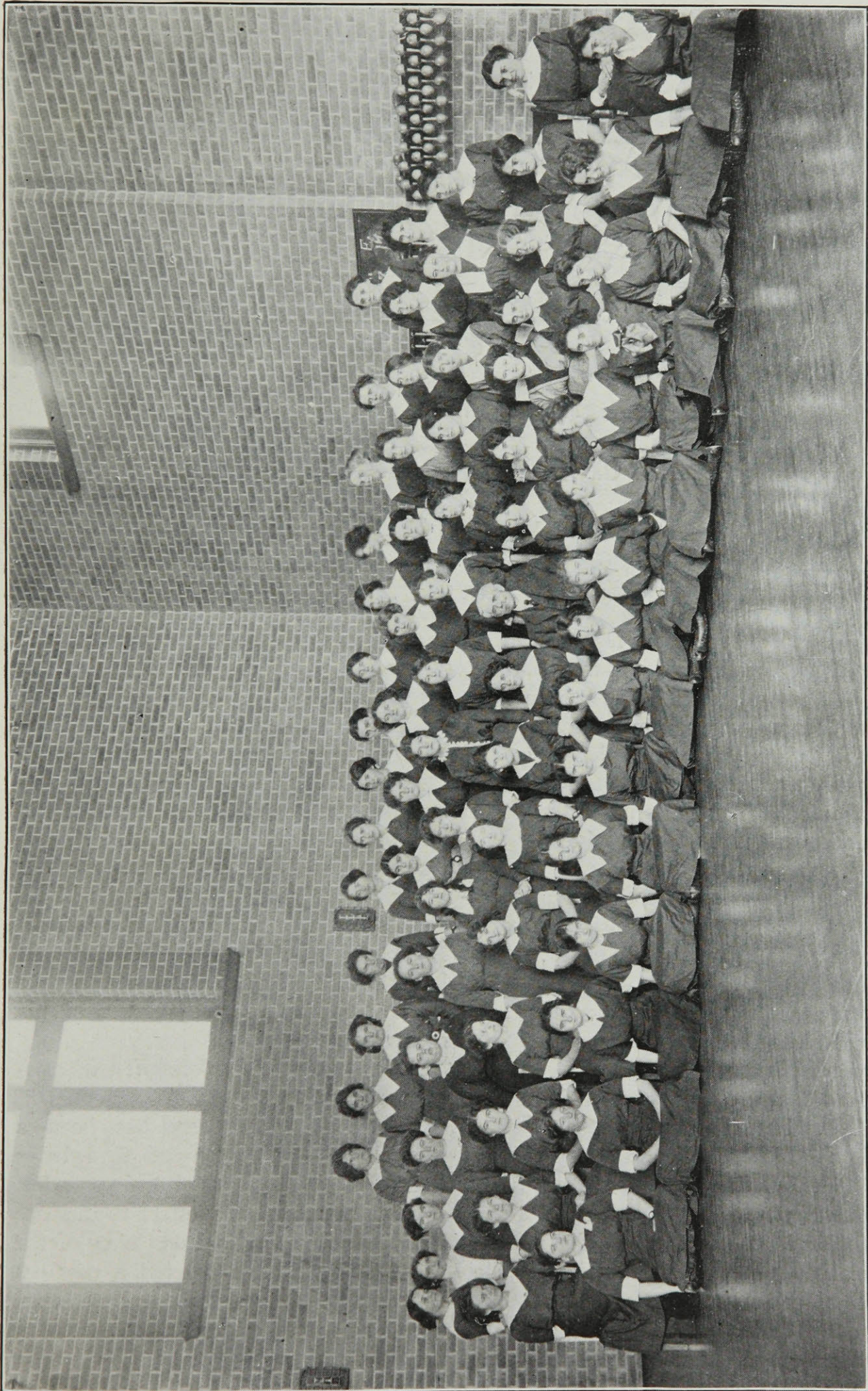
## A SCIENCE TOAST.

---

(From *Lighter Vein.*)

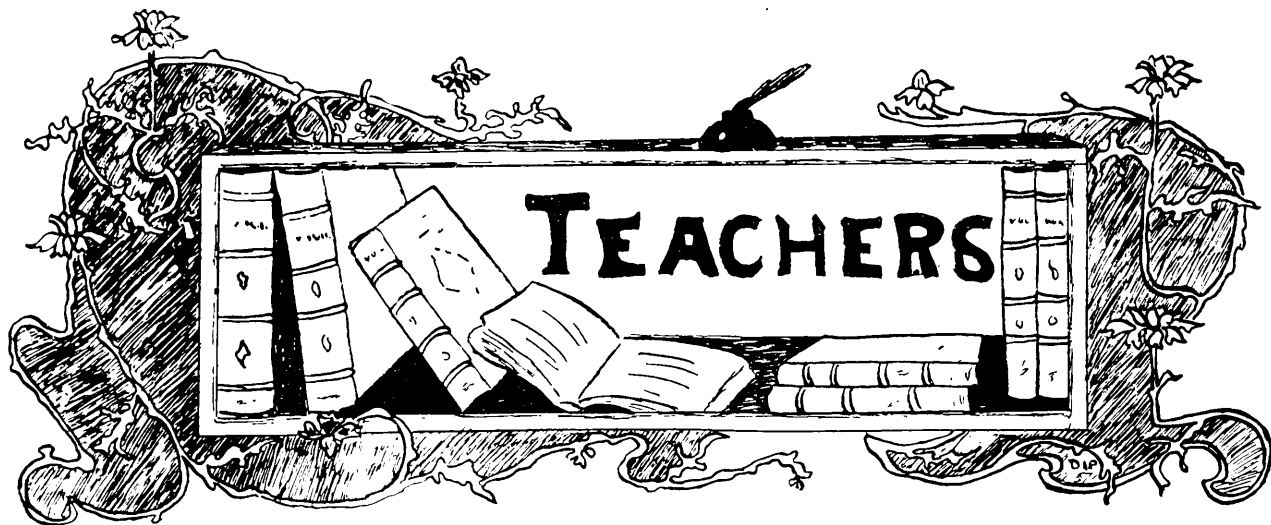
A health to a girl that can dance like a dream,  
And the girl that can pound the piano.  
A health to the girl that writes verse by the ream,  
Or toys with high C in soprano.   
To the girl that can talk and the girl that does not,  
To the saint and the sweet little sinner,  
But here's to the *cleverest* girl of the lot,  
The girl that can cook a *good* dinner.





*Elementary Class, School for Teachers.*





MISS M. MILLS, EDITOR.

## Aims of School Garden Work.

By D. W. HAMILTON, M.A., Ph. D.



**T**O stimulate interest in rural life. The agricultural industry is the largest source of our national wealth, and we should not neglect to train the future workers in this great occupation. The rapid development of manufacturing, transportation, and commerce, and the alluring attractions of cities, have drawn many of our country youth to the cities. As a partial check to the tide from the country it is hoped that a greater consideration of rural life, its advantages, beauty, independence, healthfulness, etc., and the greater attention to the things of nature in the schools may prove beneficial. Gardening in rural schools makes farm life more interesting, and enriches its intellectual content.

*To provide healthful exercise for body and mind, and to afford to the pupil an opportunity to direct his activities along useful lines.* Work in the garden affords a release from the dull routine of the schoolroom and puts the pupil out into the fresh air and sunlight. It affords a scope for motor activities that are natural to growing children.

*To develop at an early age habits of industry, respect for labor, and a love for productive and constructive work.*

The activities connected with gardening are of vital human interest. If the child is to become a business man he should have some appreciation of the great work done by the farmer, and express it in a way that will make the life of the farmer richer and fuller. But he cannot be expected to have this appreciation unless he has had some experience in common with the farmer. If the child is to be a farmer he should be able to appreciate those things that make for the greatest success in his own work.

*To impart useful information in agricultural subjects.*

In recent years there has been a marvellous application of knowledge and research to agricultural practice. We are exerting every effort to increase the productiveness and efficiency of the farm, and we have entered a new era in farming—a fact that will be more apparent in the years to come than it is now.

The knowledge of soil and atmos-

phere, of plant and animal life, that makes one on the farm an intelligent producer, also puts him in sympathetic touch with these activities of nature.

*To encourage careful observation of nature, thus enabling the person to understand his environment and to appreciate more fully the beautiful in nature.*

"If the farmer, as he trudges down the rows under the June sun, sees only clods, and weeds, and crops, he leads an empty and a barren life. But if he

products obtained from his crops or the animals that he fattens: he then realizes that he is no mere toiler; he is marshaling the hosts of the universe, and upon the skill of his generalship depends the life of nations."

"Earth's crammed with heaven, and every common bush afire with God; but only he who sees takes off his shoes."

*To give facility in the handling of tools and in the practice of garden craft.*



*School Garden at Kingston, N.B., showing Macdonald Consolidated School Building.*

knows of the moisture in air and soil, of the use of air to root and leaf, of the mysterious chemistry of the sunbeam, of the vital forces in the growing plant, of the bacteria in the soil, liberating its elements of fertility; if he sees the relation of all these natural forces to his own work; if he can follow his crops to the market, to foreign lands, to the mill, to the oven and to the table; if he knows of the hundreds of commercial

*To promote the desire to improve home surroundings and to train boys and girls to do such work with efficiency.*

Beautiful surroundings silently but potently influence us all, and teach us to love things that are "honest, lovely, and of good report." The public school is the place to which we should turn our chief attention in the effort to promote a more healthy appreciation of beautiful things in our surroundings and



our actions. School-houses and school grounds should be artistic and attractive, and the child should be surrounded by beautiful things. Trained in the habit of seeing beauty and knowing it, he will come instinctively to hate ugliness in the house, in its surroundings, and in the street.

*To promote the qualities that make for good citizenship such as the responsibilities of ownership, respect for public property, consideration for the rights of*

The work of this nature that has attracted the most attention in the United States is that of Mrs. Henry Parsons, in New York City. In 1902, she began the work of transforming a city desert of about 7 acres, lying in the midst of one of the worst tenement districts of the city. In transforming this city waste she hoped to transform the lives of the children of the district. From the day the work began the interest was intense. A three-foot high



*School Garden at Kingston, N.B., showing former School House.*

*others, and the principle of co-operation in seeking the common good.*

Dr. B. T. Galloway says of the Washington, D.C., gardens: "Civic pride is taught and respect for the property rights of others is learned. While stealing and vandalism were weekly occurrences the first summer the gardens were in existence, not one case was reported during the following year."

fence, on which adults could lean comfortably and see everything happening in the garden, satisfied their curiosity, that strongest of human traits! The work of Mrs. Parsons in its results is almost beyond belief. The dumping-ground of material refuse and the dumping-ground of refuse humanity became on the one hand a garden, on the other an uplifted community.

*To promote a spirit of independent*

*investigation in other branches of study, and to afford a concrete basis for much of the school work in arithmetic, language, drawing and other subjects.*

The extent to which the school garden work may be correlated with the ordinary school studies depends largely on the resourcefulness of the teacher. He should take advantage of the garden and of the garden exercises in adding freshness and in giving a practical bearing to subjects which are uninteresting to children. Garden work and garden observations afford interesting subject matter for exercises in drawing and composition. Many practical problems in arithmetic are suggested, and even demanded, in connection with garden work. The keeping of garden accounts may be made a valuable training in bookkeeping and in commercial arithmetic. All nature study work should be in intimate touch with the garden. The greatest success of Nature Study as a school subject has been where the child's activities have been enlisted in the real business of his life. The business of rearing plants involves more of nature than almost any activity in which the child may participate. The garden should be made the centre of as large and varied a circle of activities as possible. The teacher is thus able to make much of the formal work of the school seem worth while to the child, thereby increasing the efficiency of ALL

the work of the school. This gain in efficiency and interest in itself is sufficient to meet objections as to lack of time and crowded curriculum.

The garden fulfils its highest function of nature study by being a centre of activity whereby children may "learn those things of nature that are best worth knowing to the end of making life better worth living."

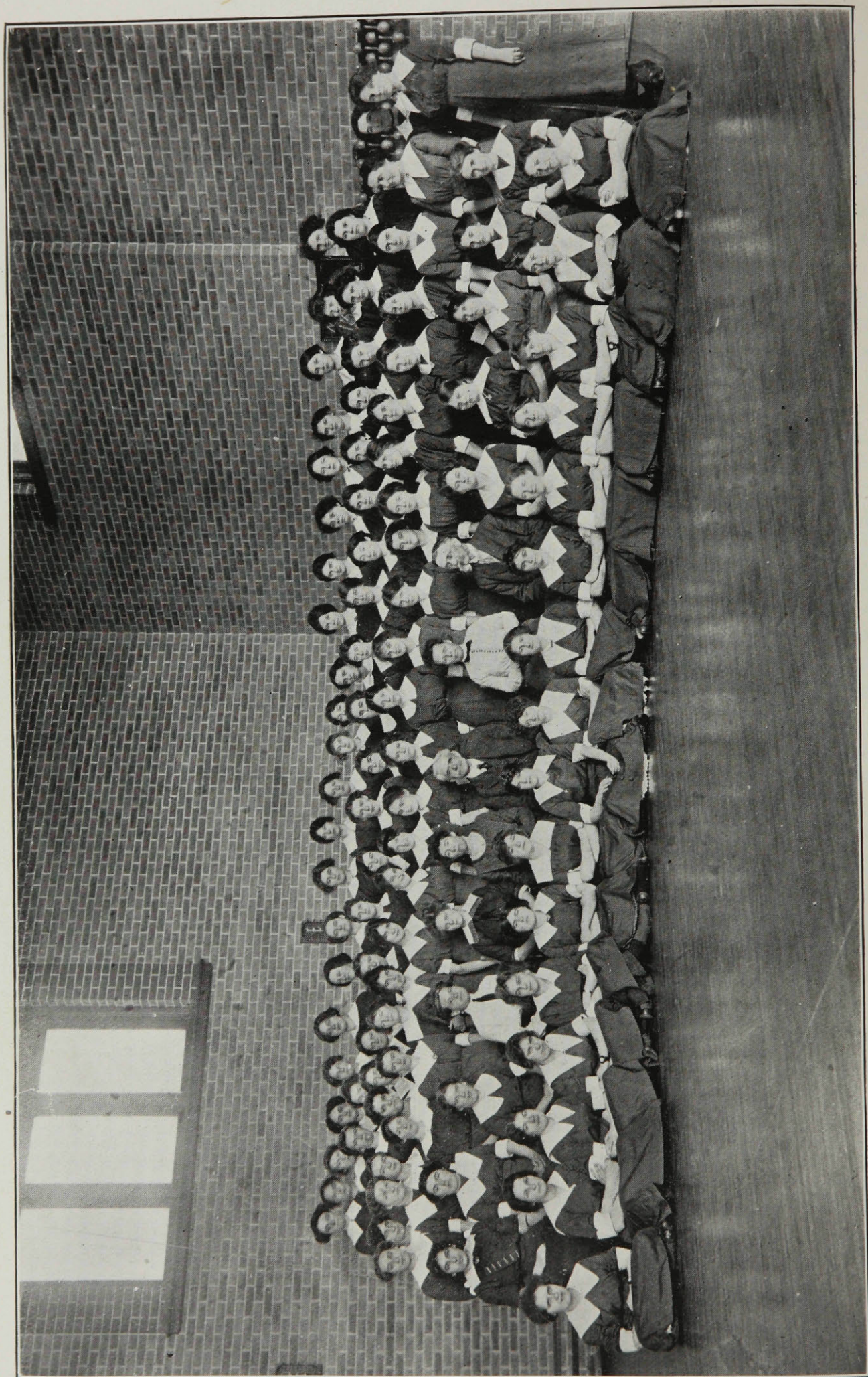
*It brings the life and interests of the school more closely into touch with the home life of the pupils.*

To do its best work, a school, in all its activities, should be in intimate touch with the homes of its pupils. The interest of the parents in at least one phase of the school work of the children—the garden work—will be immediate and certain, because here is something which is sure to be inspected and understood. This awakened interest, on the part of the parents, in the school work, will naturally extend to the other subjects, and all for the betterment of school interests. The garden is a pleasant avenue of communication between the school and the home, relating them in a new and living way, and thereby strengthening the public interest in the school as a national institution.

Someone has said that "noble dreams are great realities"—this in praise of unrealized dreams. In the fine garden, at the school or at the home, *is the noble dream and the great reality.*

---





*Model Class, School for Teachers.*



# A New Idea for Supplying Trained Teachers for Rural Schools.



MEETING of vital importance to rural education was recently held at Macdonald College, when Dr. Sinclair, Head of the School for Teachers, addressed the Schools of Agriculture and Household Science and the School for Teachers on the subject of rural education. He submitted a scheme by which students in Agriculture and Household Science by taking a minimum of pedagogical training could be legally qualified to teach in rural schools. The scheme was a recognition of the principle that with proper safeguards a certain amount of training in Agriculture or Household Science or both may, with advantage, be substituted for part of the work hitherto included in a teacher's professional training course for rural schools.

The chief argument urged in favor of the change is that one of the most important qualifications of the rural teacher is appreciation of the advantages of country life, ability to make the best of country conditions and a desire to remain in the country. It has been urged that this attitude is more likely to be secured by a training in an agricultural college and by a study of agriculture and household science than by the ordinary course of a City Normal School.

Practically all of the audience who were from the rural districts remained for the subsequent discussion in which a number of professors and students took part and the general principle of the proposal was unanimously approved.

The scheme was submitted to the Teachers' Training Committee and by it referred to the Protestant Committee.

At a meeting of the Protestant Committee, held February 21st, the following was unanimously adopted,—

## A.

Course Leading to Rural School Model Diploma.

1. This diploma to be valid in any rural Model School in the Province of Quebec.

2. The diploma to be granted to students who possess the qualifications for entrance to the Model School and who have successfully completed:—

(a) A four years' course in the School of Agriculture, together with a course in the School for Teachers of not less than one hundred hours.

or

(b) A two years' course in the School of Agriculture or in the School of Household Science and a course in the School for Teachers of not less than two hundred hours.

## B.

Course Leading to Rural School Elementary Diploma.

1. This diploma to be valid in any rural Elementary School in the Province.

2. The diploma to be granted to students who possess the qualification for entrance to the Elementary class and who have successfully completed:—

(a) A course of one year in Agriculture or Household Science and a course in the School for Teachers of not less than three months.

or

(b) A course of one year of which two-thirds has been taken in the School for Teachers and the remainder in the



School of Agriculture or in the School of Household Science.

For the student in agriculture this training is also valuable. The undergraduate can obtain a summer school to teach, which is a very desirable way of spending the holidays, besides being, to a certain extent, lucrative. This should also be good training for him should he take up teaching in after life.

For the graduate, there is the position of agricultural representative, which often leads to a position on the staff of an agricultural college, both of which positions require a certain amount of teaching, in which case the training the student would receive here in taking up the training course (as above outlined) would be of immense benefit. Therefore we strongly urge that the students here, as well as those coming in later, think seriously over this course before allowing the opportunity to pass.

It can readily be seen how this scheme will be an advantage to the cause of rural education in the Province of Quebec. The scientific training which is given at Macdonald, either in the School of Household Science or the School of Agriculture, will certainly fit the student for teaching in the rural schools of the province to a far greater degree than are many of the unqualified girls, who probably never had more than a model school training and are now teaching in many of our rural schools.

This course of training should also be an advantage to the student in domestic science taking it. To the student it will mean valuable training for settlement work, or for teaching in a school of household science, thus affording a means of earning her livelihood should she wish or require to do so.

## My Experiences as a Rural Teacher.



WHEN I alighted from the train at my destination, I saw before me a small station, with two men on the platform beside myself. I thought, at first, I had got off at the wrong place, but looking up at the sign I saw the name of the place there in large black letters. I expected to have been met by someone, so I inquired of one of the men if he had come to meet me; he said "No, I am the station agent, ask that other man." I had not time to do so before the man in question came up to me and said: "Are you the new school teacher?" When I told him that I was, he informed me that the party who were to meet me were some

distance from the station, owing to the fact that the horse was afraid of trains, and that they would be along presently.

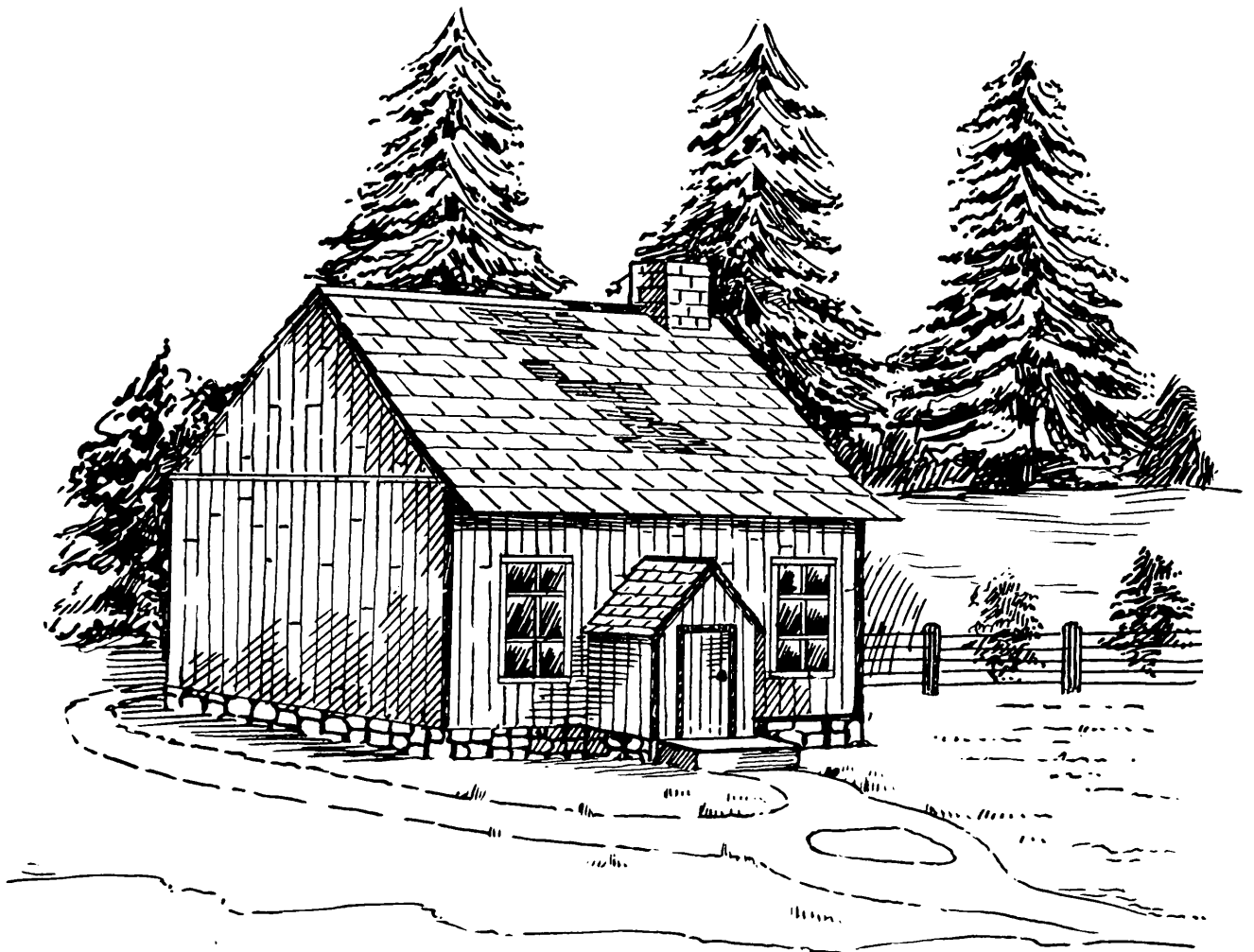
After having visited my schoolhouse that day, and consulting my notes on "The first day at school," I went to bed with a feeling of a stranger in a strange land, for the first time in my life, although everything possible had been done that day to show me that the people intended to make me feel at home, and to show me that there were some kind hearts in this out-of-the-way place.

Next morning I awoke filled with ideas and plans for my first day at school. Happening to look out of

my window, I saw groups of children wending their way to school, laden with book bags and lunch boxes. All seemed to be looking in the direction of my boarding house, no doubt wondering what "the new school teacher looked like." I thought, perhaps, my time was wrong, but on inquiring, I found that it was only 7.45 a.m. I had never gone to school so early, but I

taker of the building. I was told that there had been no one appointed as yet. So I undertook the work, and then locking my door, which was secured by a large chain and padlock, I ended my first day as a teacher.

The days began to grow into weeks, and I wondered if these people ever took any pleasure out of life. They toiled from early morn until late at



*The School House.*

soon learned that the only time the children got for play was before school.

How strange it seemed to ring a school bell in earnest for the first time and to see children of various sizes come in, some even taller than myself, and stand at their seats awaiting my next word. The day passed by very quickly with the usual routine of a first day at school. After dismissing my pupils, I asked who was the care-

night, but everybody seemed so happy and contented in this quiet little settlement. After I had been there a month I received an invitation to a dance, to which everybody in our concession went, old and young. After we had all been made to feel welcome, one man started tuning up his violin (fiddle) and soon all the young people began to step in a lively fashion forming groups on the four sides of the room.



I was asked to "Dance this with me," and soon I was being pushed and pulled through a series of complicated figures known as a set of quadrilles. This was a kind of dancing I had heard of, but had never seen before. I soon became accustomed to it, because it was a favorite pastime,—the usual way of ending a "bee," which was a frequent thing.

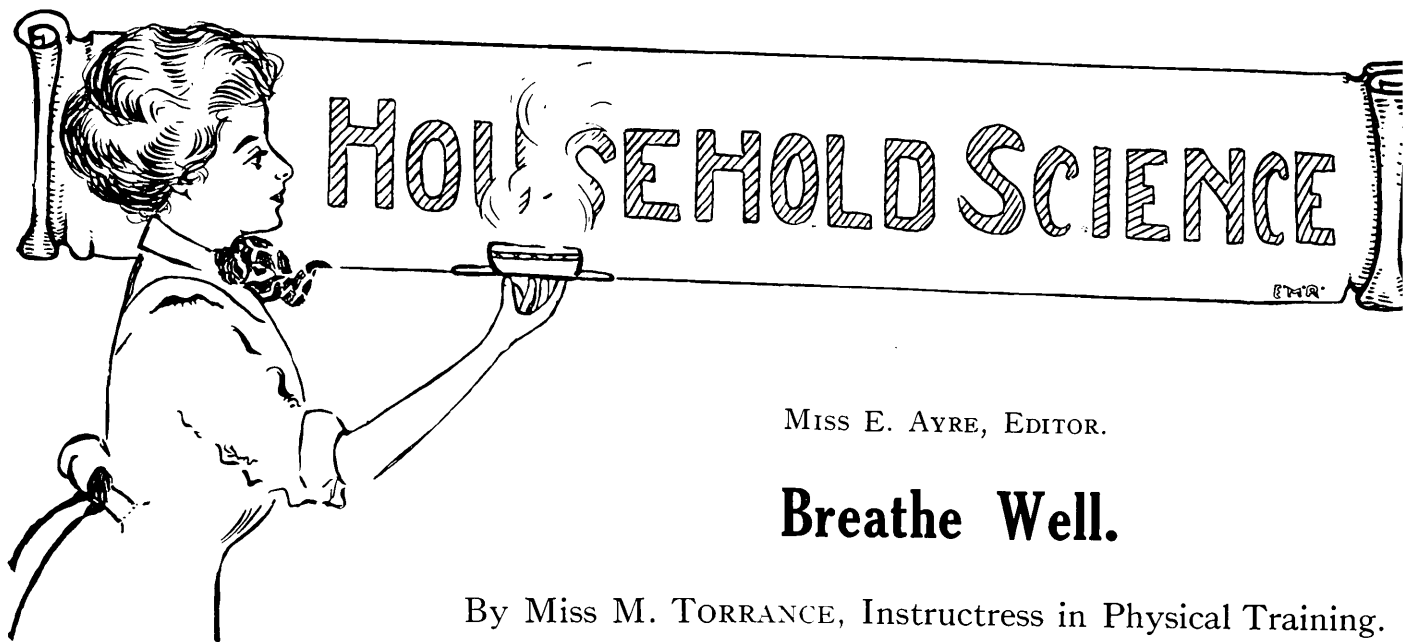
Winter was fast setting in, and I began to realize some of the hardships which fall to a teacher in a rural district. The walking became impossible and we had to resort to snowshoes. Whenever a drive was possible, it was offered to us and I was always glad to accept,—sometimes on a load of potatoes or logs, and even on the road roller, and once on a big crate which contained a harmless little white pig. As time wore on I began to enjoy what I dreaded at first. My work was so interesting, also my pupils, who used to entertain me at noon with the history of the place, while I made the tea or cocoa for their luncheon. I asked one little girl why she had been late again one morning. Having exhausted all her excuses she gave me the following: "Please, Miss ——, there was a bear in the swamp and I had to wait until he went away before I could pass, he was so big and wicked looking." On one occasion when I remained to correct some exercises, one girl came back and told me she had come to stay because she thought I would "be scared to death if I saw the ghost." She then told me how one of the old schoolmasters, fifty years ago, had been found dead in his chair one cold winter morning, and they had put

him up in the attic. She was quite sure he was there, because she had seen his bones.

Spring came very quickly, and I had a chance to teach my pupils something about the returning birds and flowers. How they did enjoy a walk through the woods instead of sitting in the stuffy schoolroom! Even the little tots gathered the flowers and learned the names of them. I began to realize how quickly my term was ending, and it was with no little feeling of regret that I sent in my resignation, for soon I would leave all these dear pupils whom just now I began to understand individually.

The last day has come. I have said my last good-bye, and as I pack up my belongings I wonder who shall occupy my place next term, and I realize that I have been benefited by this year in a rural school much more than had I taught in a town, where I might not have learned so many lessons in contentment and patience. As I walk home past the swamp, on the banks of which we had found so many flowers together, I look for the last time at my little schoolhouse where I have been so happy, and my thoughts go back to how I disliked my first few days there, and now why am I so loath to part from it and its late occupants. I hope to return to the same little school at some future time, and to find at least some of my old pupils still there. It is my opinion that a girl has not had the chance to fully enjoy teaching until she spends, at least, one year in a rural school.

E. A. G., TEACHERS, '13.



MISS E. AYRE, EDITOR.

## Breathe Well.

By Miss M. TORRANCE, Instructress in Physical Training.

"Nature has done her best—do thou thine."—*Milton*.

**O**F all factors in human life breathing is the most important. Breath is life itself, and good breathing is absolutely necessary to good health. It is absurd to imagine that one's habitual breathing is sufficient for us, because it is shallow and rarely, if ever, reaches the air cells at the base and apices of the lungs. Therefore, we realize that with the habitual breath only there are parts of the lungs which run the risk of becoming incapacitated from lack of use. This greatly to the detriment of the health of the individual. He who only half breathes, only half lives. Forced respiration is essential to completely change the air in the lungs and thus reach and stimulate parts which are left dormant under the ordinary shallow breathing habit. By this means only can a thorough ventilation of the lungs take place and a full supply of oxygen be taken in, which stirs up and disinfects the stagnant residual air, and the forced expiration rids the lungs of accumulative poisonous gases. The exercise of forced breathing maintains the elasticity of the lung tissue and expands the chest.

To correct faulty breathing while in our ordinary dress is difficult, and at first it is better to practice in gymnastic costume or before retiring. By repeated practice and intelligent dressing, however, proper breathing becomes established and the clothing will have little effect upon the muscles of the chest or lungs.

One of the chief objects of physical training is to counteract the evil effects of our modern civilization, and one of the greatest of these is dress. Study for a minute the position of the lungs in the body. Notice the base particularly, and the position of the diaphragm, and you will realize that just where you should have the most freedom you are the most restricted by your clothes. The result is that our breathing, instead of being deep and full, has become high and shallow, and we have got away from the natural deep centre breathing almost entirely. Watch the rise and fall of a woman's brooch as she breathes, and if the hands be placed on the ribs one can rarely feel any expansion sideways. There is simply an upward and downward movement of the chest—slight at that. If there is little expansion



sideways, not only do the lungs suffer but also the intercostal muscles involved in respiration and in holding the chest in its proper position. These muscles, if permitted to lie dormant, lose their strength and elasticity, become dead and unresponsive, and such weakness allows the pressure of the ribs and sternum upon the lungs to become greater and makes correct breathing

lost sight of. Many people, particularly children, think that a good chest position depends upon a big breath, and if asked to stand up straight at once draw in the breath, and often by so doing lift the shoulders, which is entirely wrong and makes the standing position stiff and unnatural. The chest rises with the breath and rests upon full lungs for a second or two, but when

the air is expelled the chest sinks and the habitual slouchy position is at once resumed.

The first step in good breathing, standing, or sitting, is to realize that the chest muscles and the lungs must work together, and again also work independently of one another. This can well be accomplished by practicing the following exercises. Inhale a deep full breath, at the same time lifting the chest as high as possible, then grip the muscles of the chest (by a slight drawing-in of centre and lifting of the diaphragm) and hold it in this high position while expelling the air. Then

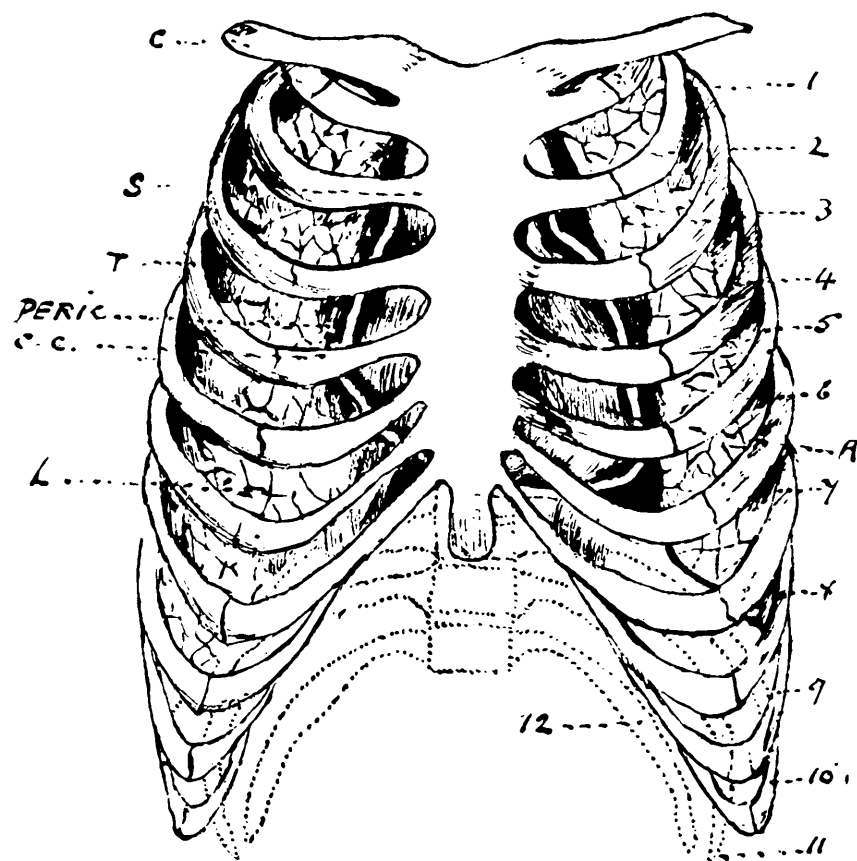


Diagram of the Thorax, showing the position of the heart and lungs:

1-12 ribs; 11-12 floating ribs; *s*, sternum; *r*, rib; *c.c.*, costal cartilages; *c*, clavicle; *l*, lungs; *a*, apex of heart; *peric*, pericardium.

more difficult in consequence. The lungs must have room to expand. The intercostal muscles must be elastic to allow this, and must also do their share by relieving the lungs of any pressure from the bony thorax. Owing to repeated incorrect standing and sitting positions and to ill-constructed clothing, these intercostal muscles have, in most of us, become far more inactive than nature ever intended them to be, and their proper use has been largely

allow the chest to resume its normal position. Again take a deep abdominal breath. Stop the air before it lifts the chest, cut it off, as it were, at the base of the ribs, then breathe out and at the same time lift the chest as high as you can so that when the air is quite expelled the chest will be as high as it was when you lifted it while inhaling in the first instance.

When by these two exercises you have satisfied yourself that your chest

muscles are fit and in good trim you must then learn to dissociate the three different ways of breathing.

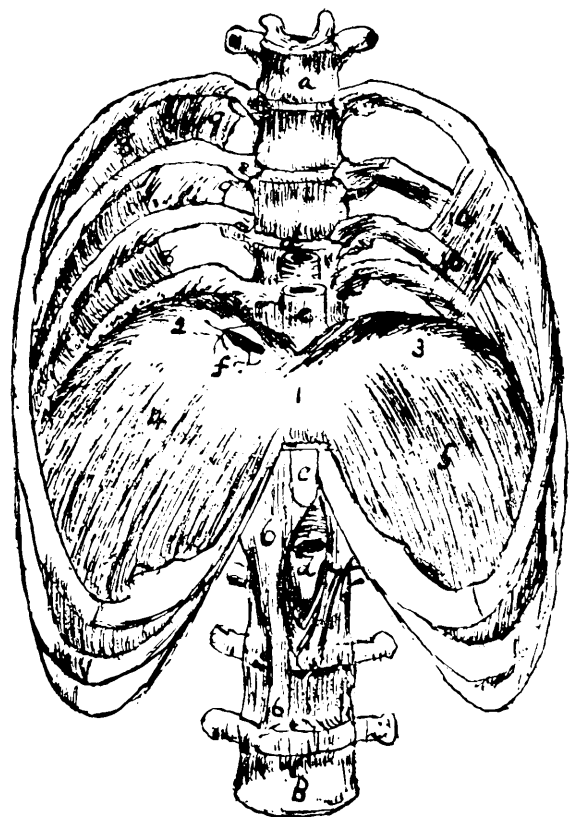
1. The clavicular or high chest.
2. The costal or rib.
3. The diaphragmatic or centre.

By clavicular breathing is meant breathing under the collar bone. This expands the apices of the lungs. Costal breathing is the expanding of the ribs sideways, and sending the air more up the back—so increasing the distance between the shoulder blades.

Diaphragmatic breathing is the depression of the diaphragm and the protrusion of the abdomen without raising the lower ribs. This last is most readily learned in the supine position. The weight of the body is thus supported so that the individual is able to concentrate her entire attention upon fixing the bony thorax and depressing the diaphragm, protruding the abdomen at every inspiration and retracting it to the utmost with every expiration. This last exercise will be found to greatly develop and give tone to the abdominal muscles. Work at these three different ways of breathing diligently, and bear in mind that to breathe well one requires the whole body from nose to abdomen. The windpipe feels like a round, smooth, open tube from throat to centre down which the air can rush without destruction to the base of the lungs.

With every indrawn breath there is a forward movement of centre with a lifting of the chest at the same time. With the outgoing breath they sink together. With this deep breath we get the necessary expansion of the ribs sideways. The greater the intake of air, the greater the expansion of the chest in every direction. The question of good breathing is so closely related to proper carriage that the two can

scarcely be considered separately. Good breathing, like good carriage, requires that the chest should be habitually upheld and automatically carried by the well-developed chest muscles, as high as is comfortable—thus giving room to the great life-giving lungs for their utmost utility. This position should be maintained whether sitting, standing, walking, running, dancing, singing, talking or reading, in fact, in every hour of life. The first and last word in physical training is breathe well; and remember, girls, carry an elated chest to make room for a happy heart within.



THE DIAPHRAGM.

*a*, sixth dorsal vertebra; *b*, fourth lumbar vertebra; *c*, lower cartilaginous extremity of the breast bone (ensiform cartilage); *dd*, a great blood-vessel (aorta) passing through the diaphragm; *e*, œsophagus; *f*, opening through which a great vein (inferior vena cava) passes; 1, 2 and 3, tendinous portion of the diaphragm; 4 and 5, muscular portion of the diaphragm; 6 and 7, the pillars of the diaphragm. These are powerful muscles which connect the tendinous portion of the diaphragm with the spinal column; 8, 9 and 10, intercostal muscles.



## Women's Institutes and the Household Science Graduate.

By MRS. W. F. STEPHEN.



FOR many years the farmers have received assistance in many ways but as yet the Province of Quebec has not awakened to its responsibility and duty in regard to helping the women. This is probably due to the women not having as yet solicited aid from the government. A movement for an appropriation to establish Women's Institutes would soon be begun if the people could but know and understand the marked benefit which would accrue to the home makers and those dependent on them if such organizations were formed throughout the province.

We feel Quebec will bestir herself and march in step with her sister provinces to the right and left of her, for on every side the Women's Institute movement is receiving not only substantial government aid, but is being fostered and encouraged in every possible manner. New Brunswick has 27 Women's Institutes and a lady superintendent; Ontario has 750, under the supervision of the Farmers' Institute superintendent. As far west as British

Columbia we find these societies or clubs doing excellent work.

What are the objects of the Institute which make it such a factor for good? The scope is a wide one—the study of domestic science, including household architecture, sanitation, ventilation; the economic and hygienic value of foods, clothing and fuel; the care and training of children with a view of raising the general standard of the health and morals of our people, and the betterment of conditions surrounding community life. The sum total is expressed in its motto—"For Home and Country."

The women of Quebec have already felt the need of such an organization, and a few progressive, energetic women have aroused sufficient interest in certain districts to have established six or

seven Institutes which hold monthly meetings, are well attended and are doing good work. This start is the nucleus of what we hope in a year or two may have developed into scores of such societies.

We find the Institute improving both homes and communities, breaking down



*Mrs. Laura Rose Stephen.*



jealousies, cementing the town and country in a common cause, developing latent talents, and spreading much useful information and bringing together the different classes and sects upon mutual ground.

To whom may we look to encourage the establishing of Women's Institutes and help in the work of the newly-fledged societies? To the graduates of Macdonald College. They are the bright and shining lights, the polished jewels scattered here and there throughout the

home from college, the very person to take up the work? She, herself, has realized the benefits of a scientific knowledge of household art; if she can assist in bringing a little of this same needed information to the women of her settlement she will indeed prove herself a benefactor.

Officers will be needed to form the executive body of the Institute. The Macdonald girl graduate will have had more opportunity of knowing the rules and regulations governing such gatherings,



*"A Feast."*

province, and from them must emanate the enthusiasm and practical assistance in the new enterprise. The College should be the foster mother to the Institute movement and her graduates the guardians of the cause. The work is so directly along the lines of the teaching the young women have received that it at once should enlist their sympathy and support, and we feel sure it will.

A leader will be wanted to start the movement for an Institute in a certain locality. Is not the graduate, lately

and she should not hesitate or decline holding office. Many such a girl would make an ideal secretary, and it might be here said that the secretaryship is really the most important office, being the one that requires executive ability. But the place where the graduate is to prove most useful is to take up the work professionally and under the government to be sent to the Institutes as a delegate to lecture and demonstrate on special topics, or lines of household work. Seventy-five per cent, or more, of



the special Institute workers in Ontario are college trained women.

The task of inaugurating this movement has been made easy, as many difficulties have been solved by other provinces, and Quebec may start in with the latest undertaking of the oldest established Institutes, such as questions bearing on public health, civic improvement, child welfare, etc.

Throughout the Dominion the time has come for a more thorough and systematic method of instruction. In Ontario the Government is meeting this

gaining practical knowledge cannot be over-estimated.

The graduates of Macdonald College, when the Quebec Government takes up the work, will be the qualified persons to give these lectures and demonstrations. In the meanwhile they can be of wonderful help in assisting with the programs of the institutes scattered here and there in the province.

The knowledge gained at such a fine seat of learning as Macdonald College is only useful to the extent to which it is helpful, not merely to the girls them-



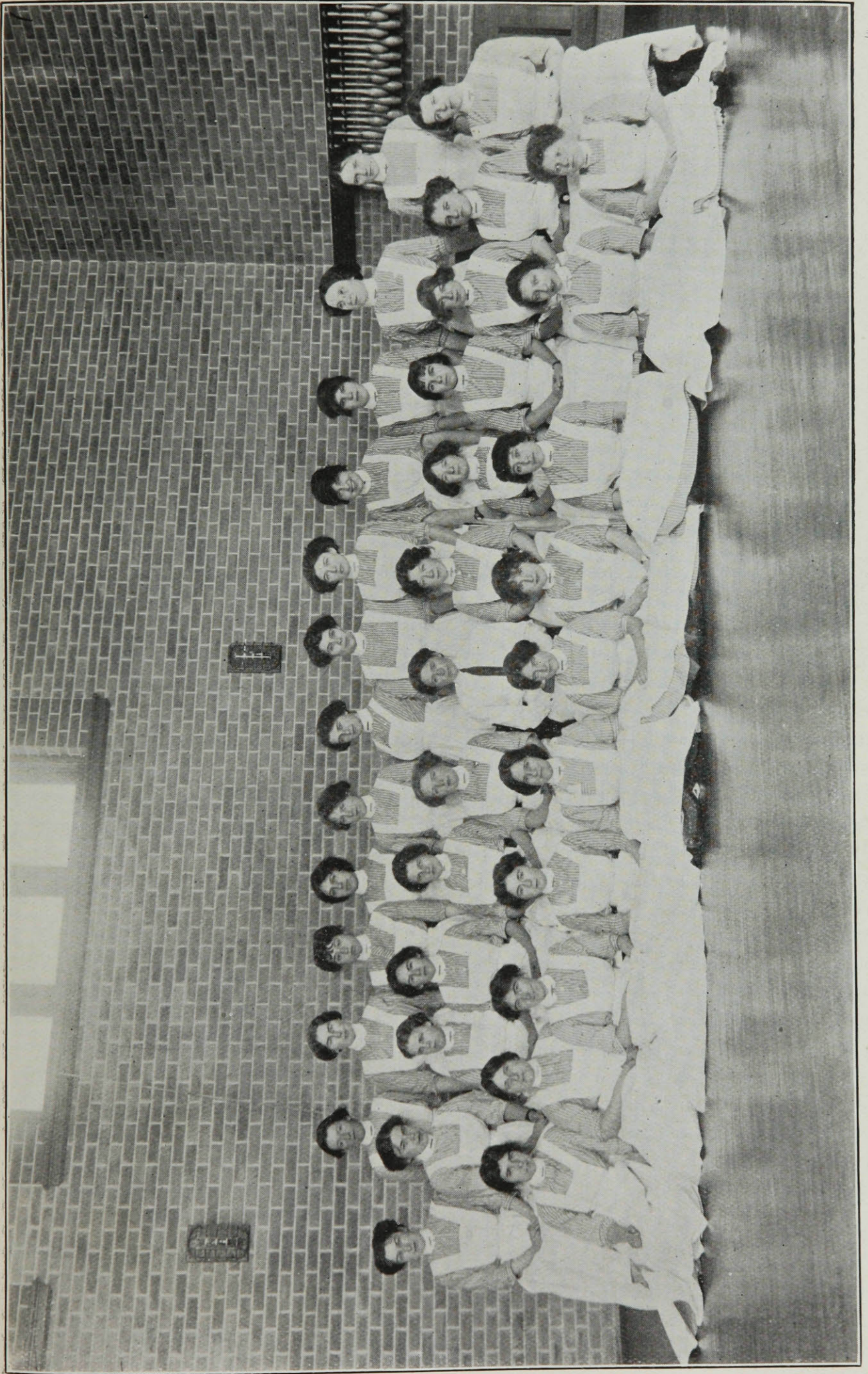
*The Winter Science Short Course.*

demand by a liberal appropriation to be devoted to demonstration-lecture courses in cooking, serving and home nursing. This work consists of lectures and demonstrations to classes organized with institutes conveniently located, a lecturer spending a day a week at each point for a period of from ten to fifteen weeks. This is bringing the domestic science school to the very door of the women in the rural districts, and assuredly the lasting benefit of such an opportunity and privilege of

selves, but more largely to the people with whom they come in contact.

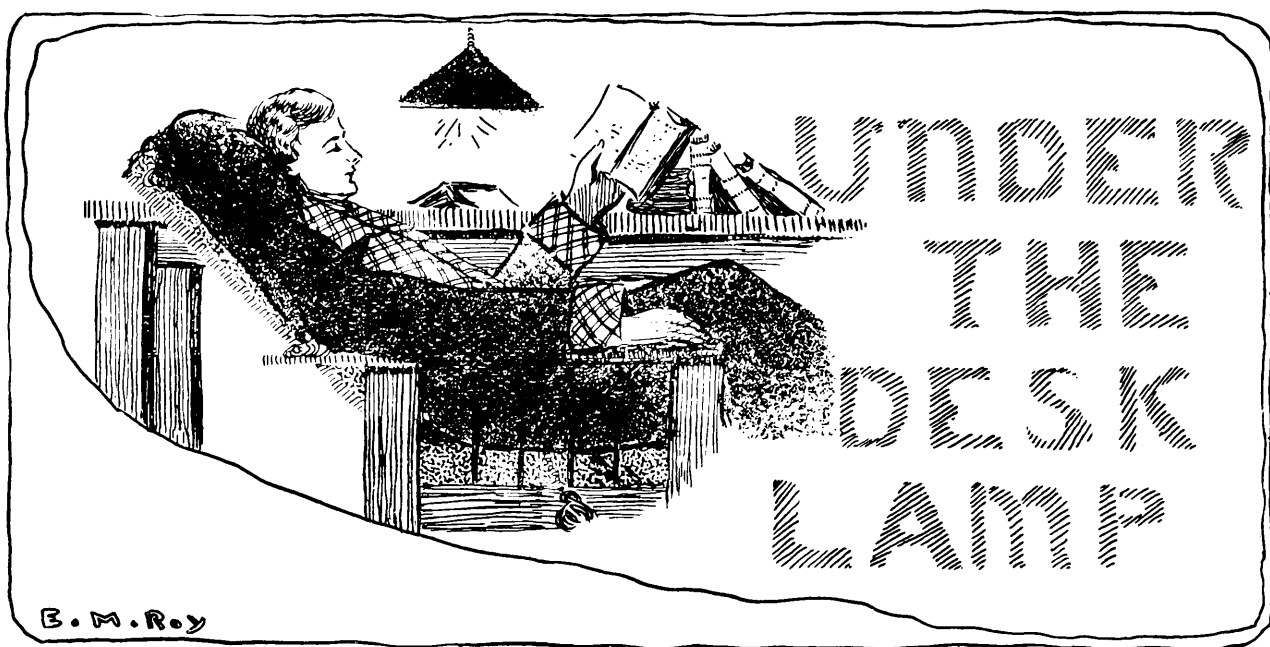
In proportion to what we give of what we have obtained is our usefulness determined. The young ladies of our schools of household science have a great field opening before them in connection with the Women's Institute movement. We are looking to them to take up this work with an earnestness of purpose to help the women of the country and town to raise the standard of the home and all its surroundings.





*Junior Household Science Class.*





#### PURPOSE.

**T**HIS department of our *Magazine* furnishes a convenient medium for the expression of student sentiment on matters of student concern. If the sentiment should be of praise, we endeavor to state it in a way as free from flattery as possible; if the opinion of the students should be one of criticism, then it becomes the editors to treat the matter in as political a manner as is possible. We invite correspondence so that we will obtain information from different sources, and be better qualified to make comment, favorable or otherwise, in the best interests of the students, and in as pleasing or as forcible a way as it can be done. We ask the students to read the Desk Lamp and to take notice of the prizes offered from time to time as well as other important student announcements.

#### PRIZES.

In our last number the editors offered prizes for short stories and snapshots, but practically no notice was taken of them by the students.

We repeat the offer for the first issue in the fall, and hope that the long vacation will furnish excellent copy.

Our offer is \$3.00 and \$2.00, respectively, for the two best stories, and \$1.00 for the best collection of three snapshots taken by a student. These to be handed in by the 1st of October, and awards to be made after a member of the Faculty has passed judgment upon them.

#### OUR GRADUATES.

In a few short weeks now the members of the Class of '13 will go up to McGill to receive their degrees and then go forth from Macdonald as Bachelors of Science in Agriculture. To each individual and to the class as a whole we wish abundant success. The members of the two preceding classes are scattered far and wide, but wherever their lot has been cast each has and is making good, and from the variety of occupations in which they are engaged, at good salaries, the prospect for positions for the class of this year and for future graduates is very bright.

We will be sorry to lose the seniors, not only as a fine bunch of fellows, but we shall miss them much in the executive work of the student activities which new men will have to undertake, and new minds plan for.

We feel assured that their industry will be just as great in their new spheres of labor as at the college, and whether engaged in teaching, in demonstrating, in government work, in farming, for others or for themselves, we know that they will do honor to themselves and to their Alma Mater, and that Canadian agriculture will receive a fresh impetus at their event. The best of luck to you, Seniors.

#### BOUND VOLUMES.

The attention of subscribers, and all those interested, is drawn to the fact that this number completes Volume III of our *Magazine*. It has been customary to bind all the four numbers into one book at the close of each session. All those wishing bound copies of the *Magazine* may either send in their four numbers to the Business Manager, and have them bound at a little extra cost, or may procure new copies by paying the regular price for the bound volume.

The *Magazine* this year contains many illustrations, and this opportunity for binding furnishes an easy and cheap method of procuring the best souvenir of the College which the *Magazine* has to offer.

Any information may be obtained from the Business Manager of *Macdonald College Magazine*.

#### EXCHANGES.

We beg to acknowledge, with thanks, the following :—*The Maritime Students' Agriculturist*, *The O. A. C. Review*, *The Stanstead College Magazine*, *The Argosy*,

*The University Monthly*, *The University of Ottawa Review*, *The Alumnus*, *The King's College Record* and *The Academy Bulletin*.

In the *Alumnus* of Iowa State College for February are some very fine pictures—the kind we like to see. There is a good poem entitled “To the Short Course Student.” The publication makes one feel that things have been and are doing at Ames.

We congratulate the *Argosy* on the attractiveness of its cover, on its short stories and good literary pieces. We think that the department “Student Sentiment on Special Subjects” should find room in every college magazine.

The *University of Ottawa Review* has several good short stories and a very good poem, “The College Boy.”

The type of article in the *King's College Record* is of high literary quality and well worth reading.

Stanstead College produces a creditable magazine. Its poem on the condition of being “Broke,” so practical to most students, is well written and typical of college life.

The *M. S. A.* is outstanding in its student contribution, a state of affairs which we ourselves strive for.

The last number of the *O. A. C. Review* has many interesting features.

The *University Magazine* of December contains a good editorial on the relation of the “College Magazine and the Undergraduates.” It says “that a college magazine is published for three avowed purposes, to encourage undergraduates in habits of careful, interesting writing, to provide readable material for subscribers, and to express through a convenient medium student sentiment on matters of student concern.” The article deals with the first two of these purposes. It states the



work of the editor as being to gather and arrange the material, to voice student opinion, etc., while the work of the undergraduate should be to write articles, short stories, poetry, etc. The editor is in a post of responsibility, and public opinion compels him to discharge his work faithfully, and he usually does. The undergraduate, not being compelled to, does not write, but the blame for the failure of the magazine rests on the undergraduates.

We trust that our own students will profit by this article and contribute freely to the Magazine, so that it may become a greater success than ever before.

In connection with the exchanges we would be grateful if the others would kindly acknowledge receiving our Magazine in order that we may know that it is no fault of our mailing system that no mention is made of our exchange copy. We will endeavor to carry out the golden rule ourselves.

---

## WORK.

Let me do my work from day to day  
In field or forest, at the desk or loom,  
In roaring market place or tranquil room;  
Let me but find it in my heart to say  
When vagrant wishes beckon me astray,  
This is my work, my blessing, not my  
doom.  
Of all who live I am the one by whom  
This work can best be done in the right  
way,

Then shall I see it not too great or  
small  
To suit my spirit and to prove my powers.  
Then shall I cheerful greet the labouring  
hours  
And cheerful turn, when the long  
shadows fall  
At eventide, to play and love and rest  
Because I know for me my work is best.

—Henry Van Dyke.



## The Seniors.



WHILE a graduating year is no longer a novelty at Macdonald, we cannot allow the class of 1913 to pass from our midst without some expression of good feeling from her sister classes in Agriculture. We have great hopes and high expectations of their influence upon our chosen calling here and in the other provinces of the Dominion. We leave it to wiser minds than ours to counsel them in their new fields of labor. If there is one thing we

need in these days it is vision. The world is moulded and governed by men who can see things both at wide range and at close contact. This, with the ability to do, is the best wish we can offer for our graduates. On the track, in the gymnasium, and in the council chamber, they have demonstrated their worth. In examinations some have set a standard which may never be excelled. Prospects will ever be bright in their case. Here's to all of you, members of M.C. Agriculture, '13.

---

" All hail, modern farmer, new knight of the land,  
 Who gives brain the mastery over his hand,  
 Set the banners of progress for him be unfurled,  
 In the palm of his hand lies the fate of the world ! "



## Personal Accounts of the Seniors.

---

*WILLIAM A. MIDDLETON.*

"Of all the airs the wind can blow,  
I dearly lo'e the West."

"Billy" is one of our hard-headed Scotchmen, coming originally from Aberdeen. He landed at Vernon, B.C., at the early age of four. At this stage, with the rest of the family, he commenced his career as a horticulturist. He received his early education at the public school and High School of Vernon. He then displayed his wisdom by choosing agriculture as a profession and took two years at the Ontario Agricultural College,



*W. A. Middleton.*

Guelph. He then still further showed his wisdom by coming to Macdonald for his B.S.A. He took part of the course with Class 12 and is finishing with Class 13.

"Billy" is a man of wide practical experience, having spent three seasons with the U.S. Dept. of Agriculture, carrying on investigation work with Fruit Diseases. At Macdonald he has made a name for himself as an athlete, having gone twice to Guelph with the winning hockey team, the last time as its captain. He also played for two seasons

on the College baseball team, and was captain of the class baseball team this year.

Horticulture is his specialty, and we all know he will do well in it.

---

*LAWRENCE D. McCLINTOCK.*

On arguing too the parson owned his skill,  
And e'en though vanquished, he could argue still.

Lawrence Delmar McClintock, strong man of Class 13, hails from no place in particular. He first made his appearance towards the end of September in the year 1887, at Point Fortune, Que. Very early in his existence he developed strong tastes for an open air life, and at the early age of two, migrated to California, where he settled on a ranch. In this wild state he remained until he had reached the age of nine, when he pulled



*L. D. McClintock.*

up stakes and started east in search of an education. His early education he got for himself at different public schools and academies in the province, finally graduating from Lachute Academy in



1902. A few years later Lawrence felt the need of a higher and more advanced education, and consequently we find him enrolled with the Freshman Class at Macdonald, in 1908. After finishing the two-year course, he decided that a greater knowledge of the practical side of life was necessary, also a greater amount of "dough," and in the spring of 1910, he again went West, this time landing at Keokuk, Iowa, where, among the many and varied practical experiences he took an active part in damming the Mississippi. His cravings for the practical things were soon satisfied, and in the Fall of 1912, we find him again at Macdonald, a member of the illustrious class of 1913.

"Mack," as he is known by his comrades, of which he has many, is a free thinker, a deep and logical reasoner, and fond of argument. At most any time of the day or night, he may be seen in the corridors, clothed in a smile and a hard hat, and discussing most any subject, from the fall of Adam to the resurrection of the body at the Judgment Day.

He is one of the steady men of his class, a good worker and always ready and willing to lend a helping hand when necessary. The future holds for "Mack" great possibilities, and no matter what sphere of life claims him, he is bound to succeed.

---

#### VICTOR MATTHEWS.

"Thou art too blunt, go to it orderly."

"Vic" thought it was a huge joke when he was born one day in the town of Heart's Content, in the "Land of the Codfish." He is never so happy as when he hears the name of Newfoundland mentioned, and would go miles and miles to discuss the attributes of his native land.

He received his early education in the St. John's Methodist College, Newfoundland, from which place he graduated with an A.A. certificate. He blew in at Macdonald in the fall of 1909, and joined Class '13, resolving to try for the B.S.A., and do honour for his country.

Although he never aspired to climb the ladder of athletics or oratorical fame,



*V. Matthews.*

"Vic" can certainly lay claim to the title of conscientious worker, and his whole course has been marked by great perseverance and steady application to his studies. Outside of his work he has devoted some of his attention to football and indoor baseball. This year he played on the College football team and the year baseball team. Recently he has developed a great fondness for the other side of the campus. He specializes in Animal Husbandry.

---

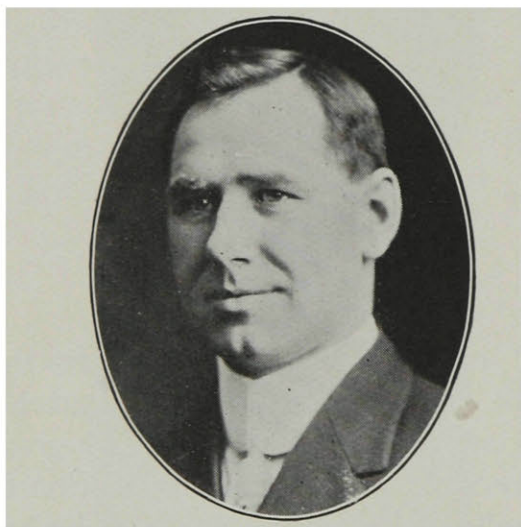
#### WILLIAM H. GIBSON.

"Much may be made of a Scotchman if he be caught young."

Bill first opened his eyes to the world in "Kirkcoobrae," Scotland, of which birthplace he is very proud. He received both his early education and early training there, and came to Canada seven years ago.



In the autumn of 1909, he entered Macdonald with Class '13, to the interests of which he has always devoted himself. He has always been a member of the Class Committee, serving as Vice-President for three years, and this year as President, which makes him President of the Students' Council. The Athletic Association, too, has demanded a fair share of his attention, being Secretary in his sophomore year and President for the spring term of 1911-12. In his first two years, "Bill" was a keen competitor in Field Day events, having captured the weight events in his freshman year. In



*W. H. Gibson.*

his sophomore year he was also Live Stock editor of the College Magazine.

He is responsible for another good thing, viz., the starting of the Animal Husbandry Club, of which he was Vice-President last year and President this year.

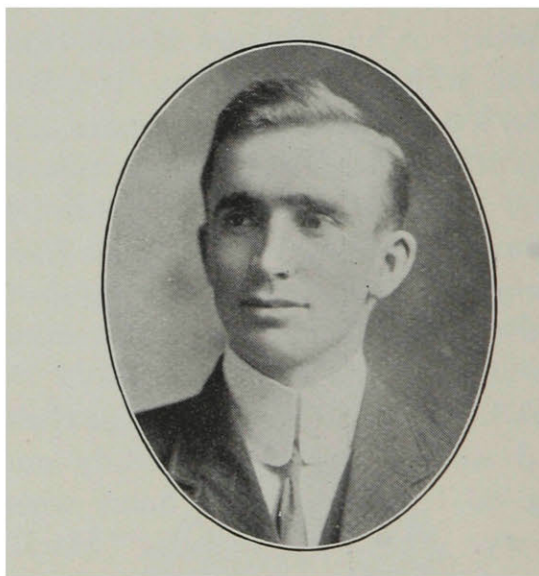
Gibson's experience in the live stock line is a wide one, as at a tender age he began to learn about Ayrshires and Clydes. He was a member of the winning team at Chicago in 1911, and his prowess at the art of stock judging needs no comment here. In the summer of 1912 he acted as farm manager on the College farm. Needless to say, he belongs to the Animal Husbandry Option and great possibilities await him in the live stock world. Good luck, "Bill."

### *J. KENNETH KING.*

"None but himself can be his parallel."

One day in August, some time in the eighties, Kenneth King became supreme on a farm in Sussex, N.B. After leaving public school there he turned his attention to farming, and in the fall of '09 joined the ranks of '13.

King has always been "full of the exuberance of healthful life," and this is especially evident in his fondness for athletics. Last year he proved himself a sprinter of first-class merit, and this year he excelled himself by winning the individual championship on Field Day.



*J. K. King.*

He has more than once been year representative on the Executive of the Athletic Association and became its President in the fall of 1912. This year he is a member of the Class Committee, occupying the envied position of treasurer. He is an earnest student and an all round jolly good fellow. Animal Husbandry is his specialty, and we predict for him a bright future.

The Conservation Commission has for three years enlisted his services in New Brunswick, and we hope this country will have much more for him to do. Keep sprinting, "Old Boy!"



*OSBURN A. COOKE.*

"This particular variety is found in Argenteuil, Quebec."

"Cookie," as he is known to the boys, made his first appearance in 1890 at Beech Ridge, P.Q., at which place he received his early education, but in search of greater knowledge he came to Macdonald in 1908. Cooke hails from a place famous at Macdonald for its big men and good sports, and Cooke is no exception to this tradition. In his freshman year he was field day champion and has always taken a prominent part



*O. A. Cooke.*

in our indoor sports, being on the first basket-ball team every year, also taking a prominent part in base-ball.

Cooke is an exception in Class '13, in that he has a motto, and has always lived up to it. Cooke's is: "Science and Teachers for Mine."

Cooke intends going back to the farm to put into practice his animal husbandry knowledge, and "to make two blades of grass grow where one has grown."

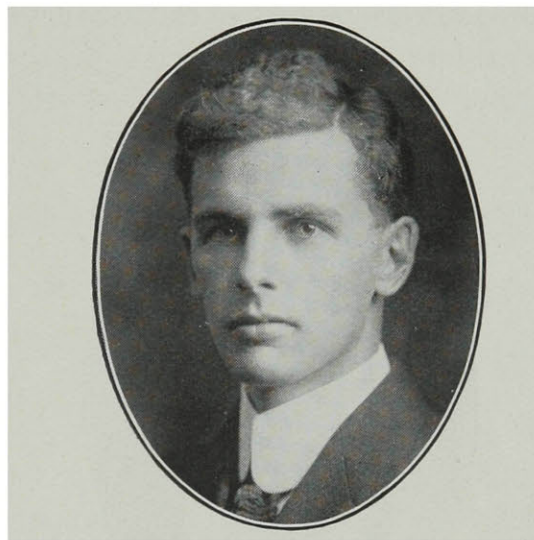
Go to it, Cooke, we wish thee success.

*WILLIAM DALGLEISH FORD.*

"An honest countenance is the best passport."

"Bill," as he is known to his classmates, was born at Portneuf, Que., in

the early spring of 1890. He received his early training at Portneuf and latterly at High School, Montreal. The call of Agriculture brought him to Macdonald in the fall of 1909, where he joined the illustrious Class '13. "Bill" has always taken a keen interest in student activities, having served on the Year Committee, treasurer of the Athletic Committee, as well as President of the



*W. D. Ford.*

Y.M.C.A. in his senior year. His specialty is Animal Husbandry, and he was one of the heroes who won the International Stock Judging Trophy at Chicago, 1911. Bill has many friends at College, and knowing his capabilities we do not hesitate to predict a brilliant future for him in his chosen profession. Go ahead, Bill, the world needs more men like you.

*E. MELVILLE DUORTE.*

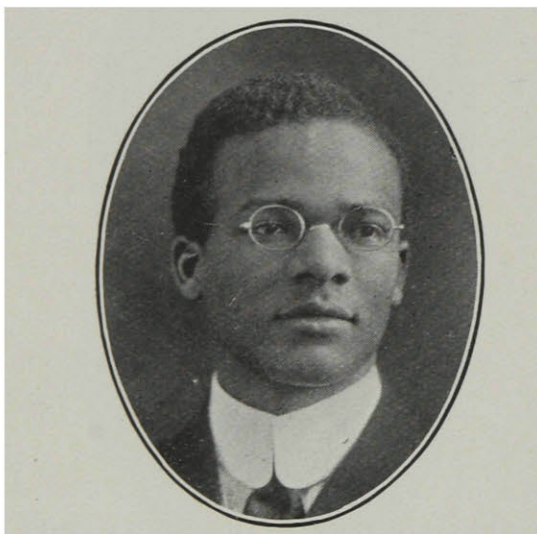
"In faith he is a worthy gentleman, exceedingly well read."

Duorte came to us from the sunny south, claiming as his birthplace the small but historical island of Nevis, B.W.I.

He was educated at the St. Kitts Grammar School, and records go to show that from an early age he developed remarkable ability. While at the



Grammar School he obtained both Junior and Senior Cambridge Local Certificates, with honours, gaining distinction in English, Botany, Religious Knowledge and Agricultural Science. Being desirous of obtaining further knowledge in this latter branch he set out for Macdonald, arriving here in the fall of 1910. His previous training enabled him to double up in his first two years, and he joined Class '13 in the fall of 1911. As a student, no one in the class possesses a keener intellect, being always at the



*E. M. DuPorte.*

top in the final standings, while his congenial disposition has won him many friends.

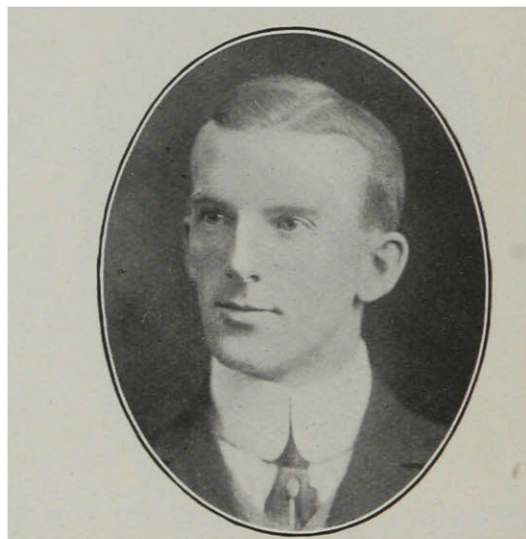
Duporte has always exhibited an aptitude for literary work, so that last year he was made secretary of the Class Literary Society, and one of the proof-readers on the Magazine staff. This year he became Associate Editor of the Magazine and Secretary of the Y.M.C.A., both of which positions he has filled with great credit to himself. He specializes in Biology.

#### *GEORGE EARLE O'BRIEN.*

"A little hot air now and then is relished by the best of men."

O'B. hails from the land of the "blue noses," being born at Beaver River, Nova Scotia, in the year 1890.

He received his early training at the Yarmouth Academy, and after finishing school there he entered the Bank of Montreal. After two years at banking, O'B. decided that a greater future was to be had in agriculture, so he severed his connections with the bank and entered Dalhousie University for a one year course in arts. From there he went to the Nova Scotia Agricultural College at Truro, and took his first two years in one. In the fall of 1911, O'Brien showed up at Macdonald College. His executive abilities were soon discovered after reaching Macdonald, and he was elected Advertising Manager of the College Magazine,



*G. E. O'Brien.*

which position he was well fitted for. He has the honor to have been the first Advertising Manager to put the Magazine on a paying basis, and a great deal of credit is due him for his untiring efforts in connection with this work.

Although he has never taken an active part in athletics, he has given no small share of his time to literary work. He won his spurs on the debating platform when he helped win the inter-class debate for his year.

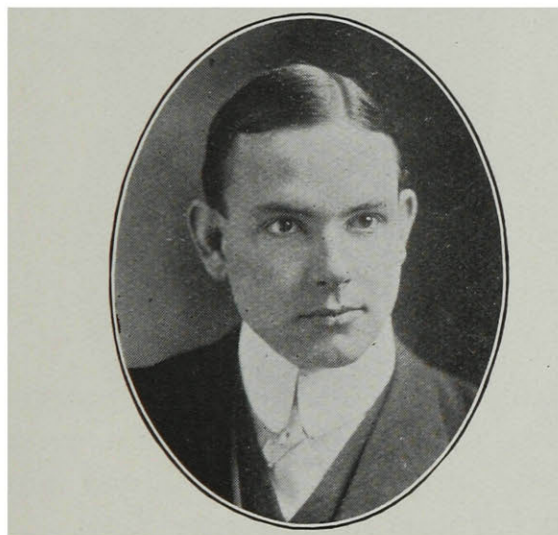
O'B. specializes in Horticulture, and his classmates feel confident that whatever work he undertakes in the future, he will make a success of it.



*J. SYDNEY DASH.*

"The heavens shook when I was born,  
For I am no small potatoes."

The first sight that Syd. saw was the smiling skies of Sunny Barbados. His early education was acquired at Combermere School, Barbados, B.W.I., where he attained the high standard required for honours in the Junior and Senior Local Examinations in the University of Cambridge. After leaving Combermere, Syd. was for five years attached to the staff of the Imperial Department of Agriculture for West Indies. Desiring a further knowledge of the sciences

*J. S. Dash.*

underlying the practice of agriculture, he betook himself to Macdonald in the fall of 1909. Here his great geniality and sociability soon gained him many friends, both in the College and outside.

Syd's scholastic attainments have been of the highest. He led his class in his Freshman and Sophomore years and ran a close second in his Junior year. On account of his varied and many qualifications, he has attained prominence in nearly every phase of College life. In his freshman year he was President of his Class; in the two following years, Secretary, and now he holds the position of Vice-President. The College Magazine owes much to him, as he has been

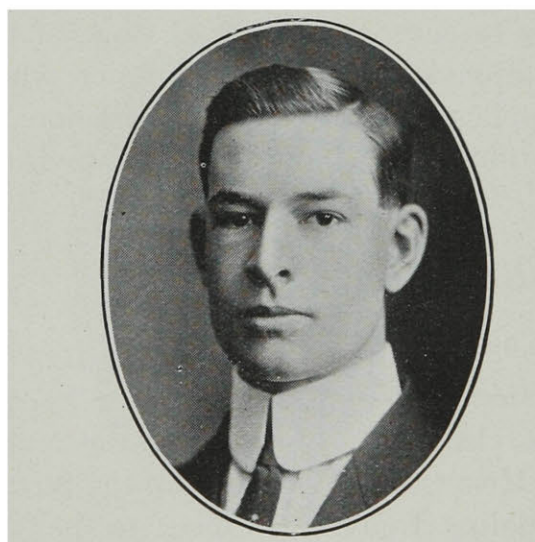
connected with it from its inception, first on the business staff and lastly as editor. In athletics, Syd's ability lies in baseball, and he is a member both of his year's team and of the College team. Last summer he spent part of his time working for the Conservation Commission, and afterwards was engaged in potato canker investigations for the Division of Botany, C.E.F., Ottawa.

Syd. specializes in Biology, and knowing him as we do, we can prophesy for him a bright and successful future.

*ARTHUR EDWIN RAYMOND.*

"He was in stature of uncommon size."

Like many of our best men, Ned hails from the East, Woodstock, N.B., having the peculiar honour of claiming him as one of her sons. Ned was born on the farm and for a few years might have been seen industriously strutting along to the

*A. E. Raymond*

country school, where he gained the rudiments of his education. Later he went to school in Woodstock, and finally graduated from High School in 1909. Thus ended the first stage of his educational career. The second stage began at Macdonald College in the fall of 1909, and is now near its completion.



Raymond's extreme good nature, aided by a hidden vein of humour, which usually comes to the surface at the proper time, has gained him many friends on both sides of the Campus. He is by no means noted for "plugging," but nevertheless he always takes a high standing in the Class.

Ned is an active worker in College activities. Last year he was Editor for Alumni on the College Magazine, and served on the Committee of the Class Literary Society. At present he is Class Secretary, member of the Y.M.C.A. Committee, and of the Class Baseball and Basketball Teams. As Chairman of the Refreshment Committee for the Masquerade this year, he deserves commendation for the excellent manner in which he conducted his department. He is one of the men to whom the Class owes the honour of being a winner of the debating trophy this year.

Ned is taking a selective course in Animal and Cereal Husbandry, and hopes to enter on the third stage of his educational career next summer when he applies the knowledge gained here to scientific farming in his native province.

---

#### EDOUARD N. BLONDIN.

"I also am an American."

"Blondy," as he is better known to his classmates, hails from the state of "*Montagnes vertes et champs verts*." He claims Louvre, France, to be the birthplace of his parents. Burlington, Vermont, claims him as one of her citizens.

His earlier education was obtained in the Public and High Schools of his native state. In 1907, he graduated from the High School in Burlington. His success was such that it enabled him to obtain a scholarship, which entitled him to take one year's academical work in the University of Vermont.

In the fall of 1909 we find him enrolled in the ranks of Class '13, at Macdonald, for the purpose of studying that subject which is the basis of our national prosperity—Agriculture. During the four years that he has spent in our midst, he has been a quiet and diligent student after agricultural knowledge.

Since the Green Mountain sides and green valleys of his native state stand out prominently as factors in the production



E. N. Blondin.

of dairy cattle and all that partakes thereto, it is with pleasure that we see Blondy enrolled in the Animal Husbandry Option in his Senior Year.

We find that his sojourn amongst us and the knowledge he acquired while studying here will be of great use to him in after life.

We all wish him every success if he returns to improve his own home place, or whether he is called to improve the conditions of his fellow agriculturists, through the means of government encouragement and support.

---

#### F. N. SAVOIE.

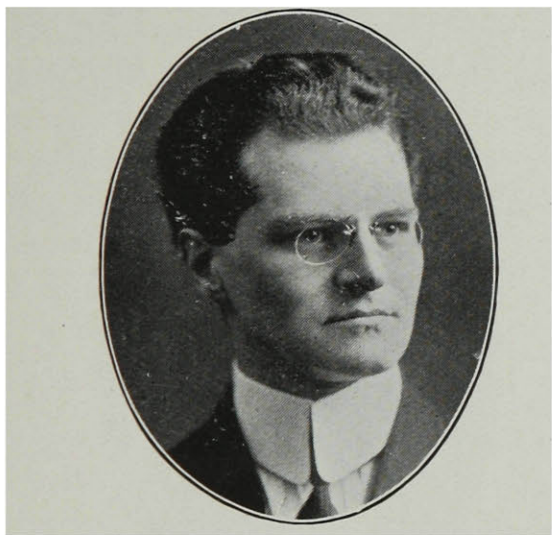
"Glasses with brass bows,  
Sat astride on his nose."

We shall leave the reader to judge whether it is a case of correlation or of mere association that has so ordained



events as to bestow on the subject of these few home truths a Christian name which depicts the character of its owner almost perfectly.

Francois Narcisse Savoie was cast on the waves of this tempestuous ocean early in life and spent his happiest days at Plessisville, Que. After spending a few years at the Seminary in Quebec City, he betook himself to Macdonald College with a view to cultivating and developing his agricultural instincts, so as to become a member of that noblest of professions,—“The men behind the plough.” To say that Narcisse did not know one word of English on his arrival



*F. N. Savoie.*

here shows no disrespect for the truth, but through the wonderful medium of evolution he has acquired a command of English which puts him on the very enviable basis of a man who can speak both English and French.

During his career at the College, Narcisse has been one of the leading lights, both literary and musically; to him entirely being due the inauguration and development of the College orchestra.

As Secretary of the Senior Literary Society and as an active member of the Macdonald College Literary Society, he further shows his literary qualifications.

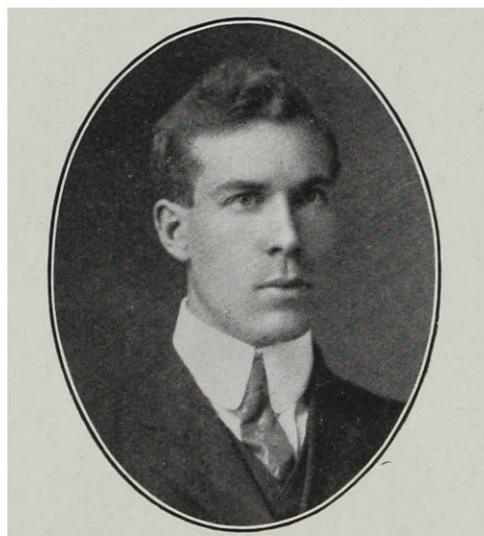
With these assets, therefore, associated with that rarest of all qualities, viz.,

the quality of being a thorough gentleman, we have the best of wishes for Narcisse, and to prophesy a successful career is only the natural outcome of a portrait which is worthy of nothing short of a cabinet minister. In fact, his mysterious leanings towards the beautiful city of Quebec would seem to be the precursor of his aspirations towards settling down in that city for good and all.

#### *B. RICHARDSON.*

“We have our little jokes like other people and our long stories.”

Where the great Tantramar Marshes, embraced by a semi-circle of low hills and fertile meadows, sweep away to the Bay of Fundy; where in the distance the phenomenal tides lift themselves to a height of sixty feet, gorging the streams and rivers twice each day, here in this picturesque and fertile country, between two and three decades ago, Benjamin



*B. Richardson.*

Richardson was born. Here, as a boy, we might have seen him leading the crowd within a stone's throw of the school-house windows, or the occasional nightly attack on the best orchard. To-day he still possesses the qualities of a leader, but he is attacking the school house and orchard with a different pur-



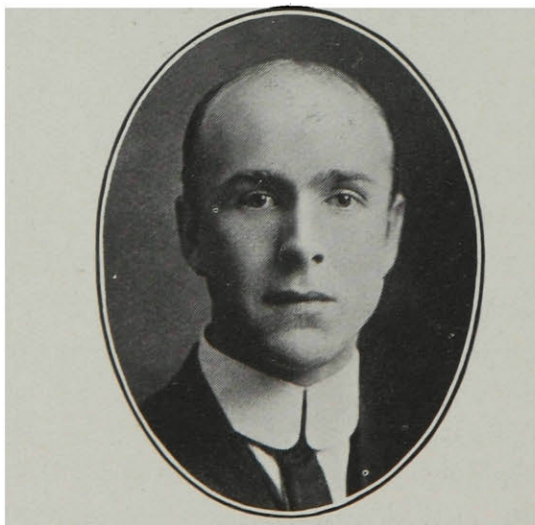
pose in mind. While yet a youth he journeyed South to the "Land of Evangeline," and later we find him doing missionary work with Grenfell on the Labrador coast, endeavouring to make crops grow where they never grew before, and to improve those already grown. For the past two years he has been doing orchard demonstration work for the government of this province.

Ben has always been active in all college organizations. He will be perhaps best remembered at college as Chairman of the Residence Committee, a position which he has filled admirably throughout the whole of this year. He is a member of the College orchestra, and we all know and appreciate his ability to play jigs. He played baseball for Class '13, and his unfailing good humour in this and in other lines atoned for much. He is a horticulturist of no mean ability, and whatever the height of development in his special line, he shall rise above it and ever maintain his place as a leader of men.

#### GEORGE HALLIDAY.

"There shall be no parting there."

George Halliday is the only representative of the Eastern Townships in the



*G. Halliday.*

Senior year, his home being at Sawyer-ville, Que. He joined the Class in the

session of '09-'10, and is one of the original members of the Class. He is specializing in the Animal Husbandry Option.

#### *K. MacBEAN.*

"I love not many words."

Kenneth MacBean, born at Bowmore, Islay, in Scotland, towards the latter end of the nineteenth century, is of Highland origin, and speaks the Gaelic almost as fluently as he speaks English. In fact, although English was the language used in his home, he almost invariably used the tongue of his fierce and hardy ancestors when conversing with his boy-friends. Concerning his school-



*K. MacBean.*

ing, it may be of interest to know that after passing through all the grades of his home school, he attended the Glasgow High School, whence he matriculated into the University of the same city.

There are two things characteristic of Scotchmen which Kenneth could not get away from, namely, a love for land to till and the desire to travel. Eventually these two forces were instrumental in causing him to come to Canada. Now, a true Scotchman usually knows a good thing when he sees it, and so our hero, after putting in the required year on a



Canadian farm, entered Macdonald College.

If Kenneth has profited by his four years at our alma mater, the profit has not been wholly one-sided, for, although he is not one who makes much noise for the sake of being heard, he has, nevertheless, given us much very enjoyable vocal and instrumental music. When Kenneth goes to the piano, takes up his violin, or plays on his flute, nobody begins to throw garbage-can covers along the corridor, and no one thinks of raising a racket in the next room. No, for it is a treat and not a punishment to listen to his playing.

We feel sure that when he leaves Macdonald, his taste and sound judgment will stand him in good stead, and will go a long way toward ensuring him success in the battle of life. His specialty is Animal Husbandry.

#### RICHARD I. HAMILTON.

"Methought, I heard a voice say  
'Fuss no more.'  
I dared not say, Amen."

R. I. Hamilton, born in Chicago, 1892, began his education in Toronto. Came



*R. I. Hamilton.*

to Montreal in 1903, and after spending three years in the public school and two years in the Montreal High School,

decided to go in for Agriculture. Entered Macdonald in 1909 with the original Class of 1913. Animal Husbandry is his option.

#### G. LeLACHEUR.

"The elements so mixed in him that Nature might stand up to say to all the world—'this was a man.'"

G. LeLacheur was born on the farm some time A.D. in P.E.I. As he has since proven himself a bigger man than his stature, and an individual whose capacity expanded beyond the confines of his native shores, we are not surprised to find him aspiring to greater things. After leaving the rural school, he gained the medal for proficiency in teaching from the Prince of Wales College, Char-



*G. LeLacheur.*

lottetown, and was appointed principal of a graded school. Ambition for a wider education led him to the O. A. C., Guelph, in the fall of 1906.

In his first year he was President of the Class Literary Society, won the Field Husbandry Medal and the Agriculture Prize. The versatility of his character was demonstrated in his second year, when he accepted, without emotion, the position of a Bible Class Leader and Joke Editor of the O. A. C. Review. He won the valedictory essay prize and the medal



for general proficiency in the work of the Two Year Course. In 1908, he assisted Prof. Klinck at Macdonald. In 1909, at the request of Dr. Robertson, he accepted the Principalship of the Macdonald Consolidated School at Hillsboro, P.E.I., and instituted a class for farmers' sons. The summer of 1910 was spent in the service of the Conservation Commission. In the fall, he enrolled for his third year at Macdonald, and accepted the Social Editorship of the Magazine. The year 1911 was spent in the Ontario Dept. of Agriculture, and in the revival of the Island Consolidated School. In 1912, he became the Seed Branch representative for the province.

Class '13 received Lally as a valuable addition. In the fall of 1912, he again served on the Magazine Board and was a member of the Class team in the Inter-class Debate. He was appointed leader for the Guelph Debate, but owing to indisposition, had to decline acceptance of the post. His social faculties and wit make him a genial companion, and his keen intellect portends "something accomplished, something done." Lally is a cerealist of no mean merit.

---

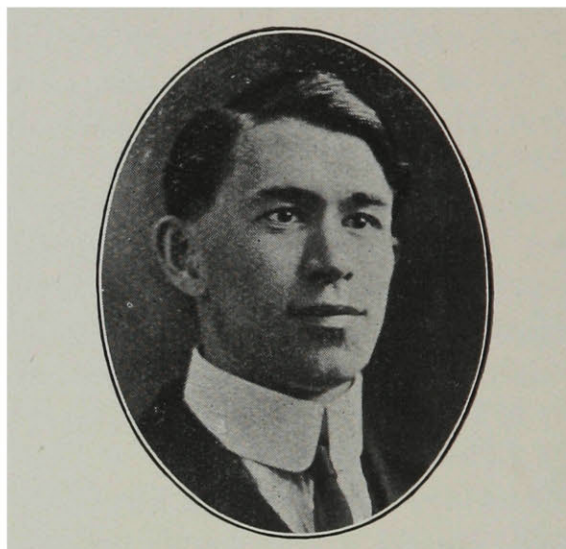
#### M. H. JENKINS.

"From Ottawa—that's where all great men come from."

M. H. Jenkins hails from the Capital of the Dominion, and has always had a liking for Orchardng and its proceeds.

Educated at the Public School and the Collegiate Institute, he came to Macdonald in the fall of 1908. In 1910, he spent the summer 'midst the historic associations of Stoney Creek and Winaona, where he got considerable insight into apple culture and raising of nursery stock. Owing to the unfortunate entrance of B. Typhosus into his system in

the early part of 1911, "Jenks" was obliged to temporarily abandon the course, but resumed in 1912, and the summer of that year was spent in gaining valuable experience as Assistant to the



M. H. Jenkins.

Superintendent of the Experimental Farm at Charlottetown.

"Murray" is very enthusiastic over Horticulture, is an ardent student of horticultural literature, and his general good business manner will stand him always in good stead.

---

#### A. C. GORHAM.

"Oh, he's little, but he's wise!  
He's a terror for his size.

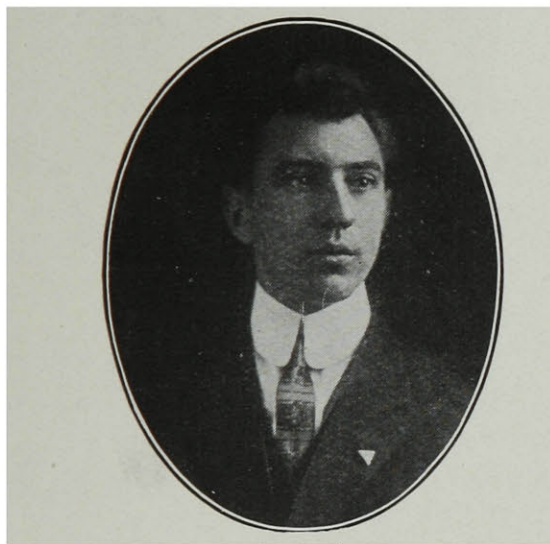
St. John, N.B., is a city of fogs, but it must have been an exceptionally bright day on which "Sandy" first struck this globe of ours in that particular spot, for there is nothing foggy about him. As a boy Sandy was rather pugnacious and fond of thrashing others, which possibly accounts for his decision to follow the teaching profession. In pursuance of this decision, he attended the Normal School at Fredericton and was afterwards engaged in teaching for a couple of years. As his fondness for the use of the rod weakened, his love of nature began to assert itself and caused him finally to



choose Agriculture as his profession. Having made this choice he naturally came to Macdonald.

Sandy is noted for two things—one he has and the other he hasn't got, the first is wit and the second size.

Sandy has been connected with the literary work of the students throughout his entire college course. He has served the Class Lit. as Committeeman, Secretary and President. Last year he was



A. C. Gorham.

Secretary of the Macdonald Lit., and this year he holds the office of President. In his Junior year he was Business Manager of the Magazine, and also served on the Y.M.C.A. Committee. The Captain of Class '13 baseball team thinks that *short* stop is the only appropriate place for Sandy.

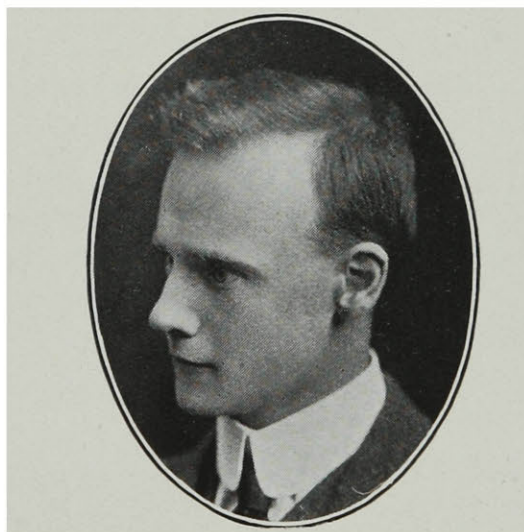
Horticulture holds a bright future in store for him.

#### DAVID E. LOTHIAN.

"Fair science frown'd not on his humble birth,  
And melancholy marked him for her own."

D. E. Lothian spent his early life in the glamor of the mountains and streams of Scott's Minstrelsy fame and nearby Melrose Abbey, which guards the heart

of Bruce. After four years at George Watson's College, Edinburgh, he served his apprenticeship in a city shipping office. Acting on the assumption that Scotland is a fine country to migrate from, he found his way, in 1909, to Montreal Shipping Office of the C.P.R., but joined Class '13 on the opening of the winter term. With an ambition towards Horticulture he spent the summer of 1910 in a Niagara peach orchard. In the next College year he found vent for his animal spirits on the Association football team and made his debut as a debater in the Assembly Hall. In the summer of 1911 he specialized in apple culture at Abbotsford, Quebec, and it was perhaps here that he developed his enthusiasm for the Pippin variety. Scotty returned to College ready for action and balanced football by taking second prizes in both the Public Speaking and Oratorical Contests. His *peculiar* social qualities also pointed him out as



D. E. Lothian.

Editor of that department in the Magazine. During the summer of 1912 he got an insight into Quebec conditions as a member of Dr. Lynde's Drainage Staff. This year he has to his credit the Captaincy of Football Team, President of Class Literary Society, leader in Inter-class and Guelph Debates, and winner of the Oratorical Contest. Lothian is a



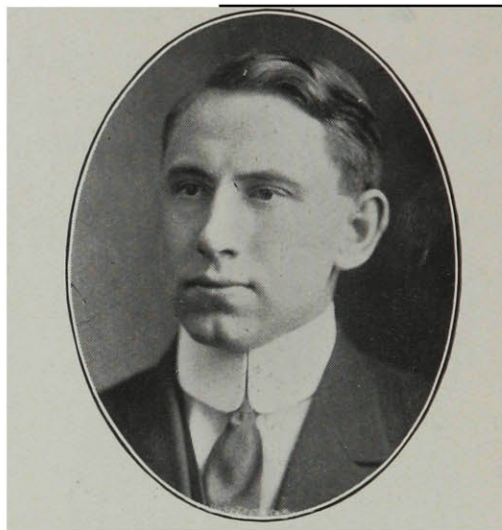
typical Scotchman, *i.e.*, a mixture of Burns, Scott, heather, whiskey and religion; but he blends the whole with such harmony that he is one of the strong men of his year and gives every promise of a successful future.

#### ARTHUR FRANKLIN EMBERLEY.

"He never burned the midnight oil in search of useless knowledge."

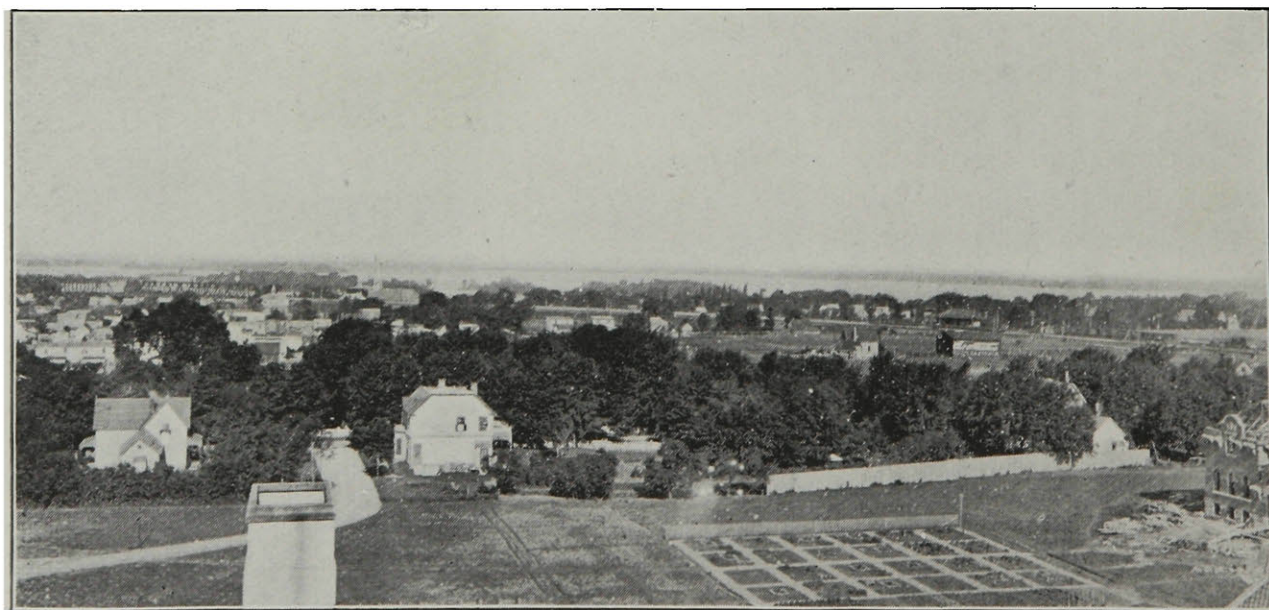
Was born at Yarker, Ont., in the year 1890, just as the cold weather was approaching. Here he passed his early days on the farm. Perhaps he used to rise in the morning with the birds; if he did, he has successfully passed that stage. His early education was received at the public school, and he matriculated from Newburgh Academy. He came to Macdonald in the fall of 1909, and seemed to find things to his liking.

"Emmer" is an optimist and all things seem to come easily to him; he accordingly takes life easily. He has twice won the high jump for Class '13, and has had a try at the hurdles. He possesses an

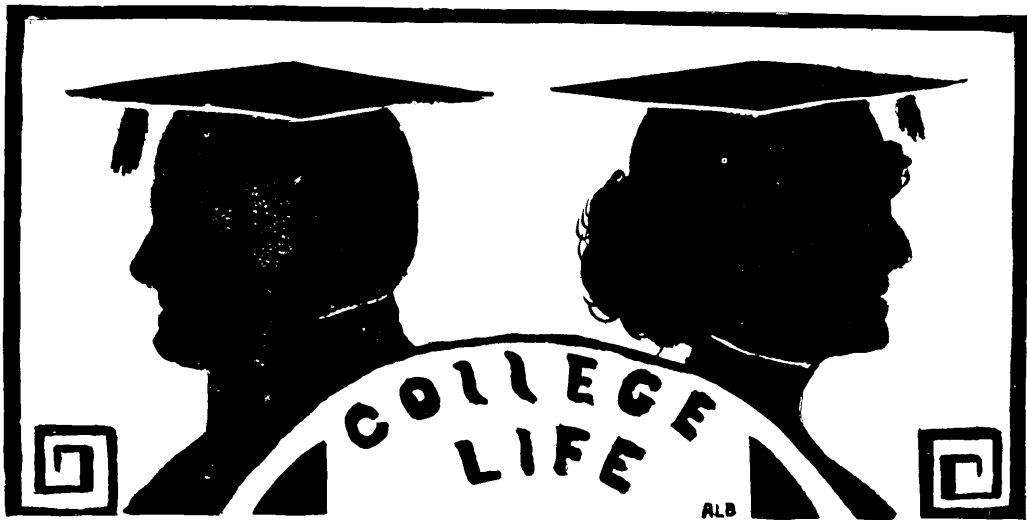


*A. F. Emberley.*

excellent bass voice and has often formed one of the College quartette. "Emmer" specializes in Horticulture. Let us hope that a good large plum will fall to his lot.



*St. Annes, from the Tower.*



O. SCHAFHEITLIN, MISS V. JOSS, MISS L. DEVILLIERS, EDITORS

## MACDONALD LITERARY SOCIETY.

### INTER-COLLEGIATE DEBATE.

We give herewith summaries of the speeches delivered by the Macdonald representatives, Messrs. Lothian and Schafheitlin, at the recent inter-collegiate debate at O.A.C. We are sorry that we were unable to obtain from the successful Guelph team a synopsis of their arguments.

Resume of Mr. Lothian's speech:

The opening sentences of my speech deal with the fact that not only in word, but also in deed has Canada, as a dignified component part of the British Empire, shown herself willing to shoulder her share of the burdens of Imperial Defence, and that her recently proposed contribution to the British navy gave no indication of a change in policy, which was not only a matter of choice but a matter of necessity. The speaker then confined his attention to the fact that the British Empire was in a state of unpreparedness for war. The scathing criticisms meted out by Lord Roberts and General Sir John French, Inspector General of the Imperial Forces, on the condition and strength of the British and Canadian forces were conclusive proofs of this point. During the last century, continued the speaker, we have greatly

increased our territory, we have greatly increased the wealth of that territory, and foreign powers daily add to their engines of war, while the Empire remains indifferent to its own insecurity. Our status in Europe, he said, shows no rise on the political barometer, as shown by the attitude of the Powers towards us at the time of the Boer War, but Canada gave of her blood and her loyalty to the Imperial Crown. Continuing he said, not only are we in danger of hostile attack from individual nations, but the dangers of formidable coalitions are only too apparent. The "Yellow Peril" was then dealt with—the rise of Japan in spite of Russian aggression, the expansion of her home population to overflowing, and the natural desire of nations to provide a home, a colony for their offspring. America, he said, will be their first goal. The necessity of continuing our political prestige in Europe, which owes its last stay in the ability to exercise physical force when conciliation has failed, our tenure of India, impossible without the means of force, were points also brought home to the audience. The speaker then rose to the climax of his speech when he said that so long as greed, avarice, pride of place occupied the ascendancy in the minds of the masses of the people, so long would armies be necessary, and not

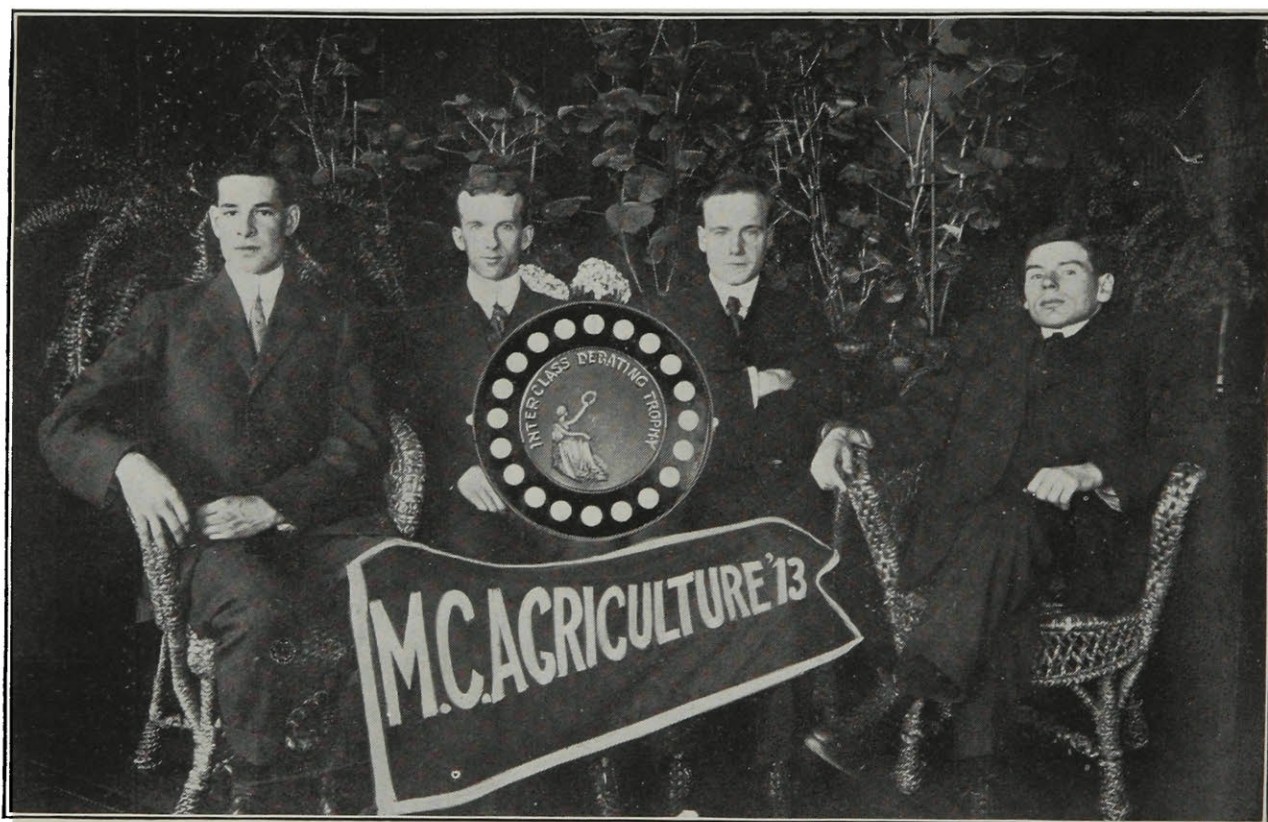


until these crude ideas had given way to the dispensation of an unswerving justice on the part of the respective nations, then, and not till then, could warfare and the use of physical force be reasonably considered obsolete.

The rebuttal was spent in confuting speculative expenses of a Canadian land force and the sapping of Canadian industrial employment.

Mr. Schafheithlin showed the possibility of an attack on Canada, Canada's

might be weakened by having to defend her colonies in India, Australia, Egypt, etc., and so weaken her home defenses. This would be Germany's chance to attack her, and she might make it warm for Great Britain. Great Britain can do nothing to prevent this policy, if it is intended, as she has not sufficient troops available for overseas duty to help France resist Germany. Therefore Great Britain would not be able to expect France's support in time of need.



*Winners of Inter-Year Debating Trophy.*

helplessness, and the benefits conscription would bring to Canada by the following points:—

I. In case of Britain's defeat at sea, or Britain being tied up in the North Sea, what would happen to Canada if she were attacked? 45,000 militia in Canada. Germany, backed up by Austria and Italy, could force Holland, Belgium and France to co-operate with her and help her to crush England at sea. England

II. In a few years Canada's reserve force would number practically every able-bodied man in the country.

III. Discipline taught during term of conscription would be of great benefit to the country. Men would learn to obey lawful orders, to respect others and respect themselves; they would learn to make personal sacrifices for a common good; they would learn authority, cleanliness and punctuality.



These virtues carried into civil life would be a great benefit to the country, as seen in Germany.

IV. People would learn co-operation. Conscription has taught the people of Europe the need and benefit of co-operation and would do the same in Canada.

V. Would teach people thriftiness. Comparing thriftiness of German and English people, as shown by their bank accounts, shows an increase of 300% in Germany, while in England it was only 200% in 20 years.

VI. Conscription would benefit the people physically. It has been found that, while England produces individuals

IX. Conscription would not hurt the industry of a country, as seen by Germany's rise in industry in the last fifty years.

X. Monroe Doctrine would not protect Canada in time of need, because (a) United States is not able to act on it. (b) United States has not a large army. (c) If United States were successful in protecting Canada, they would annex Canada. (d) Humiliating position for a country to be in to look to a source for protection to which she owes no obligation, nor to which she pays no taxes.

Thus we see the possibility of Canada



*Lighthouse near Ste. Anne.*

of greater physique, the general level is higher in Germany, due to the training in conscription term. It adds five years to a man's life and makes him more able to resist disease.

VII. Conscription has benefited the working classes in Germany by teaching them how to live better. Conditions of working people lower in England than in Germany, in spite of the fact that wages are higher, hours shorter and cost of living lower in England than in Germany.

VIII. Conscription would do much to strengthen the ties between the people of the different nationalities found in Canada.

being attacked, the benefits of conscription in providing a large reserve force; also the effects of conscription on physique, thriftiness, habits of the people, industry of the country and benefit to the working classes; and we also see the absurdity and humiliation of looking towards the United States for protection; therefore we must conclude that Canada would benefit by a system of conscription.

#### SENIOR vs. SOPHOMORE DEBATE.

On Thursday evening, March 13, the final inter-class debate in the School of Agriculture took place in the Assembly Hall. After the reading of the minutes of the previous meeting, and the render-



ing of a very fine piano duet by the Misses Tait and Wyatt, the President, Mr. A. C. Gorham, called the debaters to the platform. Messrs. O'Brien and Raymond represented the Seniors, while Messrs. Westbrook and Presley represented the Sophomore Year. The resolution for debate, which was a specially popular one, read: "That the franchise should be granted to women in the United States and Canada under the same conditions as those already enjoyed by men." The Seniors upheld the affirmative.

Mr. G. E. O'Brien, in a clear and strong speech, showed that Woman Suffrage should be granted on the basis of Justice, since:

1. The evolution of the woman demands the right of the franchise.
2. The right of suffrage is one of the essential rights of citizenship.
3. Governments derive their just powers from the consent of the governed.
4. Taxation without representation is unjust.
5. The ballot is the only protection of woman's interests.

These arguments Mr. O'Brien drove home with logical and sound reasoning, and his speech visibly impressed the audience.

Mr. Westbrook, leader for the negative, followed with a clear and concise speech in which he first answered some of the arguments of his opponent and then went on and proved that:

A. Woman Suffrage is unnecessary because:

1. Women have made rapid advancement during the last 150 years without the vote.
2. The laws made by man clearly favor woman's rights as a citizen.
3. Women are now exerting influence for good in an indirect manner that would be wiped out on their appearance in public.

B. Women suffrage is inexpedient, because:

1. Women are not in a position to give the necessary strength that should lie back of their ballot, due to lack of education in politics.

2. It would have a detrimental effect on the home and country at large.

3. It is not a universal demand.

These arguments Mr. Westbrook backed up with concrete examples, and when he sat down the audience decided that after all the women did not need the franchise as badly as they had thought they did.

Mr. Raymond, seconder of the affirmative, delivered a logical and well-arranged speech in which he showed that:

A. Woman Suffrage is practicable in Canada and the United States, since

1. It has been successful in the United States and foreign countries wherever in operation.

2. The constitutional changes will not be difficult to bring about.

B. Woman Suffrage will benefit the Government, since:—

1. New abilities will be made available.
2. The educational system will be improved.
3. Social conditions will be improved.

Mr. Raymond brought out these arguments in a clear and pleasing manner, but the fact that he, as well as Mr. O'Brien, to some extent, read the greater part of his speech, detracted much from the strength of his delivery. This was all the more clearly brought out by the fact that both speakers of the negative side spoke practically without the aid of notes.

Mr. Presley closed the arguments for the negative with a lengthy and characteristic speech, in which he several times "brought down the house" with his wit and humour. He showed that what was wanted in politics to-day was real, honest, thorough, and efficient labour,

and showed that under present conditions, woman was not able to answer all these requirements. He also showed that Woman Suffrage was unnecessary, since:—

1. Women do not want it
2. Woman Suffrage, where it exists, is not favourable to its extension.
3. Under present conditions, on account of the duties which nature has laid upon her, woman is the equal, if not the superior, of man; to lower this altitude by claiming for her a material equality would be to put her back in her former low position.

suspense was broken by the entrance of the judges, who had had difficulty in coming to a decision. Dr. MacFarlane, in giving the decision, congratulated the speakers of the negative in coming before an audience composed largely of "suffragettes" and giving such strong anti-suffrage speeches; but informed the audience that in the near future women were to receive votes.—O.S., '14.

#### FRESHMAN-SOPHOMORE DEBATE.

On January thirtieth was held the third regular meeting of the Macdonald College Literary Society. The meeting



*The Hockey Team in Action.*

Mr. O'Brien, in a spirited rebuttal, claimed that women did use the vote whenever they had the chance, and quoted figures to prove his statement. He also went after various other arguments of his opponents in a masterful way, and proved himself to be a quick thinker on the platform.

While the judges, Dr. MacFarlane, Prof. Bunting and Mr. Cutler, were in deliberation, the audience were treated to a fine vocal solo by Miss Rollins. During the remainder of the intermission, judging from the excited talk in the hall, the audience debated the question all over again. At last the

took the form of a debate, the contestants being the first and second years. The affirmative side of the question was upheld by Messrs. Taylor and McKecknie, of the Sophomore year, while Messrs. Jones and Crowthers, of the Freshman year, supported the negative.

Mr. A. C. Gorham, President of the Society, presided, and the meeting was opened by the rendering of a piano solo by Miss De Villiers. The subject for debate was then put forward and read: Resolved: "That Canada should contribute to the Imperial Navy rather than build a navy of her own."



Mr. Taylor, in leading for the affirmative, spoke in a clear and definite manner. He based his arguments on three consecutive thoughts, viz: "that Canada's safety depends on the safety of the Empire; that the safety of the Empire depends on the Supremacy of the Imperial Navy; and that the Supremacy of the Imperial Navy depends largely on Canada's policy." He laid greatest stress on the last clause and proved that to be at all beneficial to the Empire, Canada's policy must be one of contribution. Mr. McKecknie ably seconded Mr. Taylor and brought out strongly the fact that only through the concentration of the armed forces of the Empire could the greatest efficiency be produced. He proved again the truth of the old maxim, "In unity there is strength," and stated that the British Admiralty had seen that to insure the safety of Great Britain the naval forces must be kept within a short distance of the home station.

Mr. Jones, in support of the negative, spoke deliberately and to the point. He stated that Canada differed from Great Britain on many questions, and that should she participate in international problems there would be constant differences between the two countries. He piled up facts which went to prove that Great Britain's present circumstances were of the best; that the German war scare was only a bubble; and that the armed forces of Great Britain were very adequate. In an easy manner Mr. Crowthers claimed the construction of a Canadian Navy as the only safe policy. He substantiated his claim by stating that Canada had great possibilities of becoming the distributing centre of the British Empire; that she had many natural resources to develop; and that by constructing a navy she would be aiding her own industry. He

spoke very fully and proved his statements well.

To divert the thoughts of the various classmen and make it possible for them to stand the suspense while the judges, Dr. Lynde, Prof. Kneeland, and Mr. Edmison, were in deliberation, the audience was favored with a humorous recitation by Miss Millward and a vocal solo by Miss Quigley. On the return of the judges, the decision was given in favor of the affirmative, and the meeting broke up with the jubilant Sophomores carrying their victorious team across the hall shoulder high to the accompaniment of class yells.

H. McO. '16.

#### TEACHERS' LITERARY SOCIETIES.

##### Section A Debate.

A very interesting debate took place in Section A Literary Society on Thursday evening, March 6, the subject being: Resolved: "That Women should have votes."

The affirmative was upheld by the Misses M. Geddes and V. Reid, and the negative by the Misses B. Milford and H. Ramsdell. All the speakers showed splendid qualities as debaters, the argumentation and delivery of Miss Reid being especially noteworthy. The debate was closely contested, but the judges decided in favour of the affirmative.

While the judges were deciding the debate Miss Mattie Taylor read a splendid paper on the life of Shelly, and Miss Goodchild discussed some of the poet's characteristics.

##### Model Debate.

On February 10th Section A and Section B of the Model Class met for a very interesting debate. The subject chosen was a popular one, viz:—Resolved: "That the West offers more advantages to the ambitious man than

the East." Miss B. Reichling and Miss E. Stewart, of Section A, upheld the affirmative, while Miss D. Slack and Miss B. Clarke, representing Section B, argued on the negative side. The debate was full of life and the speakers showed that they had their subject well in hand. The decision was a close one, but the judges, Miss Robins and Miss Kruse, decided that the affirmative had won out.

#### Section C's Play.

On Saturday evening, Dec. 6th, the students of Section C Model Class treated their Professors and college friends to a very enjoyable play entitled, "The French Maid and the Phonograph"

Under the able management of Miss Mabel Morrison the play was an excellent success.

Just before the raising of the curtain a section yell was given which convinced even the "Aggies" that girls can give a hearty college cry as well as boys.

#### *Cast of Characters*

Flossie Green . . . . . Miss Alice Pratt  
Mollie Green . . . . . Miss Alberta Hough  
Mrs. Green . . . . . Miss Shirley Ross  
Miss Lotta Ayres . Miss Dorothy Buzzell  
Pauline . . . . . Miss Helen Fish  
Gladys . . . . . Miss Alice Bruneau  
Mary Ann French . . . . . Miss Pearl

Heatherington

Madame Renard . Miss Helen Armitage

#### CLASS LITERARY SOCIETIES.

##### *School of Agriculture.*

Since the last issue of the Magazine, Class '14 has had two very interesting literary meetings. The former of these, held on Jan. 21st, was taken up by readings and recitations. All the members of the class had to take a turn, and the meeting was full of interest and amusement. On Feb. 25th Prof. Klinck addressed the society on "Some Prob-

lems of Rural Life." This proved to be a most interesting and instructive meeting, and the society feels indebted to Prof. Klinck for his kindness and trouble in providing this interesting evening.

Class '15 has also been busy along literary lines. On Feb. 26th they met for debate, the subject being: Resolved: "That corporal punishment be abolished in Public Schools." The debate was closely contested, but Messrs. Haecker and Williamson, for the affirmative, were unable to beat down the arguments of Messrs. Howard and MacLaren for the negative. Mr. McClintock, '13, kindly acted as judge. On March 12th the society again met in a debate in which Messrs. Grisdale and Taylor debated against Messrs. Westbrook and Presley on the Suffrage question. The class debating team in this way received some valuable practise on the platform, and were also able to gain some valuable light on the probable way in which the Seniors would tackle the question in the inter-class debate.

The members of Class '16 have shown great interest in their class literary society during this term. On Jan. 22nd the society met for a spirited debate, the subject being: Resolved: "That the press is the greatest public benefactor." Messrs. Crowthers and Hutchings spoke for the affirmative, the negative being upheld by Messrs. O. Lemoine and Jones. After a close contest the champions of the negative side were declared the winners. On Feb. 21st the society met for a general entertainment. Mr. Lyster gave a humorous reading; Mr. Hyndman recounted the trip to Guelph; Mr. McCormick followed with a talk on flying-fish, while Mr. Boving closed the meeting with a talk on skis and skiing. On Feb. 18th the society again met for debate, the subject being: Resolved:



"That gymnastic exercises under Macdonald College conditions should be made compulsory." The affirmative was ably upheld by Messrs. Cochrane and McDiarmid, but Messrs. Martin and Biggar were in great form and won out. Mr. C. Lemoine also gave a short speech on Suffragettes.

#### A "FIVE HUNDRED" PARTY.

The Short Course Science Girls were At Home to a few of their Aggie friends on the evening of March seventh. Miss McGill graced the occasion and did much to make the evening a very enjoyable one. The early part of the evening was spent at progressive five hundred, at which several hitherto unknown "sharks" were discovered. Three enviable prizes were offered, and the first, a large box of chocolates, was won by Miss Cooke; the second, a beautiful Macdonald cushion, was awarded to Mr. Matthews; while the solace for defeat fell to Mr. McClintock.

Music and songs enlivened the party from time to time, Miss Vessot giving several specially well-rendered solos. After the delicious refreshments, Miss Henderson took a couple of flashlights of the merry party. Then came the reluctant farewell, with its Auld Lang Syne and cheers for the hostesses, the Alma Mater, Miss McGill, and Old McGill.

#### COLLEGE LIFE.

During the last two months the social life at the college has been a busy one. There has been skating, that ever popular and cherished pastime, snow-shoeing, ice-boating, receptions at the faculty houses, entertainments and every possible form of amusement imaginable. It is with a feeling of regret that we look forward to the time, so near at hand, when the skating and winter sports will be things of the past, but on the other

hand, we rejoice at the thought of the green fields and sunshine, and all the pleasures that the spring time and summer will have in store for us. Let us hope that our remaining few weeks at college will be as pleasant as the past ones have been, and that next fall will see a great host of eager students returning to the college along with a large and energetic class of new students.

It will be impossible in this issue to recount in detail all the "doings" around college of the last two months, these would fill a volume in themselves; a few of the most important, however, deserve special mention.

#### GRAND ENTERTAINMENT.

On Feb. 7th, a "Grand Entertainment" was held in the Assembly Hall; voluntary contributions were taken at the door, the money thus realized going towards the expenses in connection with sending of the athletic teams to Guelph. To say that the entertainment was a great success is putting it mildly; everybody came away perfectly satisfied, while the financial returns amounted to the substantial sum of two hundred and forty dollars.

The programme, which was of a diversified character, started with a gymnastic display under the personal supervision of Major Sharpe. The boys did some hair-raising stunts on the parallel bars and jumping box; while the mat work, imitation tight rope walking, etc., brought down the house. It would be useless to try to describe all the various items of the programme; suffice it to say that all were rendered in a most acceptable manner judging from the rounds of applause which followed each number. Perhaps "Souza's Band" is deserving of special mention. This band which had been procured at great

expense, and which consisted of a big drum, kettle drum, one violin, two mandolins and one flute, made a great hit. The bandsmen were dressed in the height of "Band Fashion," and were greeted and applauded with showers of citrous fruits. The coloured "Odd-fellows" also made a decided hit with their comic songs, stories and jokes and kept the audience in a continuous uproar of laughter. The "Italian Accordionist" was also given an enthusiastic hearing, and was showered with coppers. The following is the detailed programme:

- 1 Gymnastic Display.....
- 2 Piano Solo. . . . .Miss KILBURN.
- 3 Vocal Solo. . . . .Miss McLELLAND.
- 4 Instrumental Selection . . . . .Messrs.  
The WILLIAMSON BROS., ROBINSON  
and MAPP.
- 5 Vocal Duet....Misses ARMITAGE and  
QUIGLEY.
- 6 Souza's Band. . . . .
- 7 The Oddfellows. . . . .  
Messrs. PRESLEY and EVANS.
- 8 Violin Solo . . . . .Mr. SCHAFHEITLIN.
- 9 Recitation . . . . .Miss MILLWARD.

*(Humorous)*

- 10 Instrumental Selections....  
Messrs. The WILLIAMSON BROS.,  
ROBINSON and MAPP.
- 11 Accordion Solo . . . . .Mr. G. BOVING.
- 12 Comic Song . . . . .Mr. STEPHENS

Much credit is due to Mr. S. Dash for the able way in which he arranged and managed the entertainment, while much thanks is due to all those who helped make this evening such a great success.

O. S. '14.

#### PLEASANT EVENINGS.

Through the kindness of Mrs. Kneeland, Mrs. Emberley and Miss Robins several very delightful evenings have

been spent by various sections from the Ladies' Residence and classes of "Aggies" during the past two months. These evenings will always be looked back upon with pleasure by the students and ex-students of Macdonald. Were it not for these pleasant little treats our social life here would indeed be dull, and we are truly thankful to these ladies for their kindness in providing for our social welfare.

#### SCIENCE RECEPTION.

The Annual Science Reception took place on Saturday evening, March the fifteenth. The first part of the programme consisted of a grand concert in the Assembly Hall, which was very prettily decorated for the occasion. Mystery seemed to surround this item of entertainment as no one seemed to know the character of the performance. However, we were not long left in doubt, for soon the worthy Chairman of the evening, Professor Lochhead, announced the first item.

This appeared in the shape of a chorus rendered ably by the "Science" and supported by some of the "sterner sex."

Then followed many beautiful and interesting items which were well carried out and fully appreciated by all.

The best, which is always kept for the last, consisted of tableaux illustrating Tennyson's "Dream of Fair Women." These called forth much applause, each fresh vision of loveliness puzzling anew the doubting "Aggie" in his choice of the "most fair." Those who represented these parts are to be congratulated on their several successes.

The latter part of the evening was passed in the Girls' Gymnasium, where various games were enjoyed and refreshments served.

The evening passed by all too soon and ended by everybody singing heartily the old but familiar "Auld Lang Syne."



## ORCHESTRAL CONCERT.

On Saturday evening, March 8th, the McGill Undergraduates Orchestra and Mandolin Club held their Second Annual Concert at Macdonald College. This concert was the first musical treat that was provided for the students of Macdonald during this year and was much appreciated by all. The orchestra is certainly to be congratulated on the masterful and finished manner in which they rendered the various selections; the interpretations of Dvorak's Humoreske, which they repeated by special request, and of their encore, "When the midnight Choo-choo starts for Alabam," were especially favourably received by the entire audience.

It seems a pity that we, situated as we are so near a large musical centre, do not have the opportunity of hearing good music oftener than we do. We have a fine hall, a beautiful organ, and an appreciative audience; let us hope then, that in the future our needs along musical lines will be better supplied than they have been in the past year. Such an evening as we had on March the 8th makes us realize what pleasure we may derive from good music, and also makes us realize how much we are missing by not hearing more music.

The following is the programme of the evening:

## PART I.

INTRODUCTION.—"*Come fill your glasses up to McGill.*"

I OVERTURE.—Light Cavalry. *Suppe*  
Orchestra

II STRING QUARTETTE.—Selected.

III VOCAL SOLO.—"My Ships."

*A. Bonett*

Miss Beatrice Fraser

IV SELECTION.—"Humoreske." *Dvorak*  
Orchestra

V SELECTION.—McGill Mandolin Cl.

VI SELECTION.—"Prince of Pilsen."—  
*Gaston Luden.*  
Orchestra.

## PART II.

I OVERTURE.—Morning, Noon and Night in Vienna... *Suppe*  
Orchestra

II SELECTION.—McGill Mandolin Cl.

III SELECTION.—(a) Sextette, from Lucia de Lammermoor. *Donizetti*  
(b) Miserère from Il Trovatore.

*Verdi*

Cornet and Trombone Duet. Orchestra

IV VOCAL SOLO. (a) The Leaves and the Wind. *Franco Levia*

(b) The First of June. *H. Oliver*  
Miss Beatrice Fraser

V Concerted Number for Wind Instruments *"William Tell"*

VI MARCH.—King Cotton. *Sousa*

## GOD SAVE THE KING.

## THE ELEMENTARY RECEPTION.

The annual reception of the Elementary Class took place on January the eighteenth, 1913. The Gym, which was the scene of the festivities, was very prettily decorated with pennants, hung in such a way as to form the class pin. The sporting corner was an attractive new feature.

The "Find the Faculty" Contest was quite an original guessing game, and it astonished many of the said Faculty to find themselves pinned to the wall. The result of "Telegrams" was highly appreciated, the prize-winning one running thus:

"Come quickly, Mr. Jull, by freight train. A hen killed!"

The scene of refreshments proved as popular as ever and kept the refreshment committee very busy behind the counter.

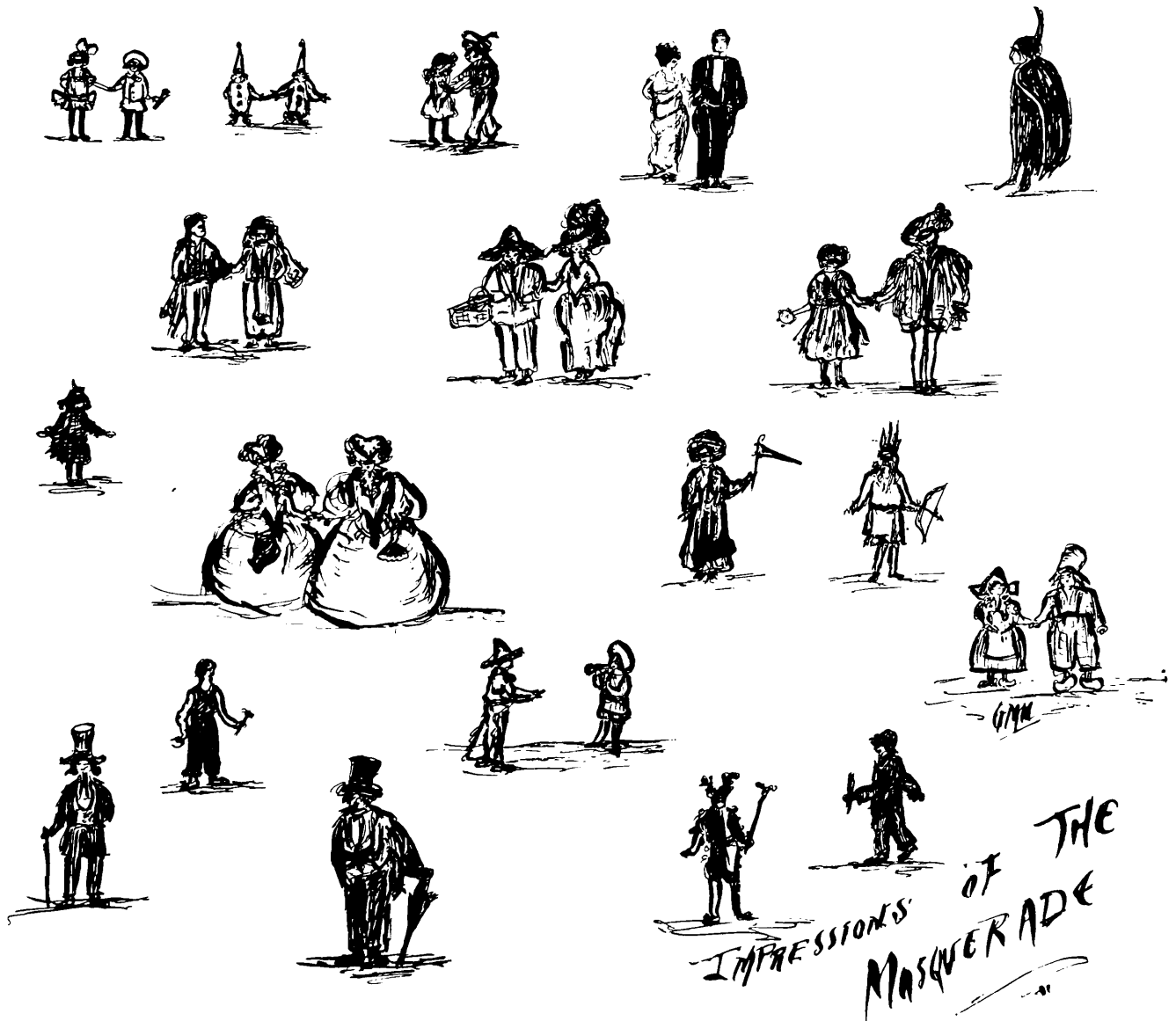
The singing of Auld Lang Syne brought the evening to a close.

The motto "Many hands make light work" was effectively carried out at the end of the evening.

### THE SIXTH ANNUAL MASQUERADE.

The greatest social function of the session took place at M. A. C., on Feb. 28th, 1913, when the students in residence held their Sixth Annual Masquerade Ball. The preparations were carefully planned by the various committees, and, judging from the smiling, care-free expressions that we saw around us that

laced green and gold crepe paper, with long streamers which reached to the balcony. In the centre of this canopy was a Macdonald crest illuminated by electric light. The windows of the Gym. were decorated with the different class banners, pennants and crests, and around the entire room were red, white and blue electric bulbs, giving the whole a



night, we are obliged to recognize their endeavours as a complete success.

Our guests arrived at 8.00 p.m. and were received in the Gymnasium by Dr. and Mrs. Harrison, Miss Macmillan and "Bill" Gibson, Senior President. The "Gym." was very tastefully decorated with numerous flags and pennants, and there was a large canopy, made of inter-

mellow and pleasing effect; while at the alcove end was Brown's orchestra on a platform, above which was "Macdonald" in green and gold lights. One's first impression on entering the Gym. was one of bewilderment, immediately followed by admiration. The corridors of the Residence also came in for their share of the decorations, the walls being



artistically covered with pennants, snow-shoes, hockey-sticks, etc., while at either end of each corridor were "cosy-corners" constructed of fir trees. The effect was so natural, that one might have been in the woods on a cool summer's evening; and these pretty little nooks were in such demand by the fussers, that even "Ginger" complained of not being able to obtain a seat there.

Before commencing the programme, which consisted of eighteen dances and four extras, there was a grand promen-

ing, who impersonated an Italian flower vender. Mr. Boving not only looked the part, but also acted it extremely well.

The floor looked inviting, and by this time no one could any longer resist the temptation of dancing, but were soon gliding round to the strains of a slow waltz. The floor was good, the music was good and the room filled with charming girls—what more could mortal man desire? The popular "moonlight dance" was also in evidence, and in addition



*Flashlight of the Masquerade Ball.*

ade to show off the costumes and enable the judges to decide on the best. There was Mephistopheles and the Evening Star, a Cadet and a Cow-Girl, a Territorial and an Indian Maid, the Johnson Tartan and a Dairymaid, Buster Brown, Mary Jane, and many other attractive and original costumes. The judges had much difficulty in awarding the prizes, but showed their good taste in giving the Ladies' Prize to Miss Bertha Reichling, who represented a Gainsborough, and the Gentleman's Prize to Mr. Paul Bov-

ing, there was a "spot-light" novelty, by means of which the fussers were detected. This was a great source of amusement, especially to the onlookers.

After the eighth dance, supper was served in the Dining Hall, where, thanks to the efforts of the Refreshment Committee, everything went as smoothly as in a well-regulated hotel—refreshments being served to the large crowd with a minimum amount of inconvenience.

While at supper, Mrs. Harrison presented Miss Reichling and Mr. Boving

with the costume prizes, amidst great applause.

After supper, we returned to the Gym. and again indulged in the "pastime of the Gods." When the Entertainment Committee made out the programme they thought that the dances were sufficient, but they had not reckoned with their "guests," who insisted on encoring every dance—the encores being willingly played by the Orchestra. In this way, dancing was kept up until 3.00 a.m., and even then we were loathe to leave.

In conclusion we may say that although everyone did his best to enliven the evening, yet the success of the Ball was in a large measure due to the untiring effort of Messrs. Richardson, Dash and Raymond, the chairmen of the various committees, and this fact was fully appreciated by everyone. The Masquerade Ball this year was better, if such a thing is possible, than previous years, and we feel sure that in future the Committees will have to "go some" to produce an entertainment that will even equal it.

J. McC., '16

#### Y.M.C.A. NOTES.

Since the opening of this term the Association has held several interesting meetings. Among the speakers were Mr. F. McClement, who spoke on the importance of Christian faith. Dean Sinclair gave a very interesting address on the responsibility of the educated individual to society. Rev. Mr. Lancaster spoke on "The Reasonableness of Christian faith." Dr. Kelly's address on the Life of David Livingstone was much appreciated, Dr. Kelly recalling the time when he, as a boy, first heard of David Livingstone's great discoveries in Africa, and, later, of Stanley's search for and finding of the great explorer. Dr. Kelly illustrated his remarks by a

map showing the journeys of Livingstone in Africa. Dr. Macfarlane's arguments for Christianity as opposed to Agnosticism, or Atheism, were carefully listened to and brought out considerable discussion. Prof. Lohead gave a talk on "Religion and Science," showing clearly that science was not contradictory to religion, but rather that it definitely proves the need of a superior mind to control the universe.

The meetings of the Association held on March 9 were probably the most enthusiastic held this year. We had present with us Mr. E. A. Roberts, of New York, County Work Secretary of the International Y.M.C.A., and Mr. Taylor Statten, Boys' Work Secretary of the Canadian National Council of Y.M.C.A. After some very hearty singing, Mr. Roberts gave an excellent address on the opportunities for service in the rural communities, emphasizing strongly the point that every man should serve along the line for which he is best fitted. Everyone was so impressed with his talk that he was asked to speak again in the afternoon. This he did, and so impressed the audience with the importance of the rural Y.M.C.A. work that it was unanimously decided to open a class for the study of rural problems and the solution of these problems as it could be brought about by the rural Y.M.C.A. Prof. Klinck was asked to take charge of these classes, which he kindly consented to do. Thus we have the inauguration of a new and most important line of work by our Y.M.C.A.

R. E. H., '14.

#### THE GUELPH TRIP.

On Thursday, Feb. 13th, the athletic and debating teams left for the annual intercollegiate meet, which this year was held at Guelph. We were to have left at 11 p.m., but, as usual, the train was



almost an hour late. There was a good crowd down at the station to see us off, and when the train eventually pulled out there was no lack of cheering and good wishes. We immediately went to bed, but not to sleep. Someone seemed to have something to say all night long, and Hammond was heard to remark bitterly next morning that he was going to give Smith a testimonial for being a thoroughly quiet and sober bed-fellow. Next morning the train was an hour and a half late in getting into Toronto, but Ricker and some of the more energetic members of the party insisted on having us up in plenty of time, and in the case of the heavy sleepers they were unceremoniously deposited on the floor. As we had just time to catch our train at Toronto, with no time for breakfast, we were all feeling pretty empty when we boarded the Guelph train. A man came round on the train with light refreshments, and was cleaned out before you could say "knife." Peanuts and candies, however, do not make a very satisfying meal, and we thought longingly of the mush and toast of the dining hall. The remains of the feast were used to bombard each other with, much to the brakeman's disgust.

Guelph was finally reached at 11 o'clock, and we found the whole of the second year down at the station to meet us, lectures having been relegated to the background. The Macdonald boys were immediately annexed, and the whole bunch proceeded to pile on to the college car. On reaching the residence the visitors were shown their rooms and some of them succeeded in getting a little much-needed rest before the basket-ball game in the afternoon.

The first game of the series, the basket-ball match, took place at 4.30 on Friday afternoon. We had heard great tales of the O. A. C. team, and

they certainly did not belie their reputation. Our fellows were up against a tough proposition, but they played a hard game, and the Guelph boys had to work hard for their victory. The Macdonald team got in one or two pretty pieces of combination, which netted us several baskets. The O.A.C., however, had it on us in combination and shooting, and gave our boys a chance to show what they could do in an uphill fight. When time was called, the score stood at 56-16 in favour of O. A. C.

In the evening, most of the fellows went over to the fourth year "hop," held in Macdonald Hall. The orchestra was excellent, and everyone enjoyed the dance, although the hockey men had to leave early to be in form for next day's game. Macdonald fellows do not need to be shown the way when it comes to dancing, and they knew all the ropes from long experience over at the girls' residence. The last dance ended soon after twelve, and the party dispersed to get a little of the rest which had been denied them on the train the night before.

Our only win was the hockey match, on Saturday morning. It was a *hard* game, but our fellows won out by 2-0, one goal in each half. One of the Guelph men was kind enough to shoot one of our goals for us, but did not seem to appreciate our thanks. Young played a splendid game, although he had a cold during the entire trip.

The base-ball game, which came off on Saturday afternoon, was the best match, from the spectators' point of view. The first two innings were very even, and then O. A. C. piled up five runs in one inning. At the sixth innings our fellows evened up, the score standing at 11 all. During the last three innings, however, the Guelph fellows again got ahead, and the final score was O. A. C.

16, Macdonald 13. Sutton played a splendid game, both pitching and at the bat, and even the violent rooting of the other side failed to upset his nerve.

The debate took place on Saturday night, and resulted in another win for Guelph. The subject was: Resolved: "That conscription for all men from 18 to 24 years of age would be in the best interests of Canada," and Macdonald had the affirmative. "Scotty" led off with a well-arranged speech, and prospects seemed bright for our side. Bramhill, however, the leader of the negative, made the speech of the evening, and it was that that won them the debate. The Guelph men had the better delivery,

and it was no doubt in this that they obtained their lead, for our men appeared to have more matter on the subject.

We left Guelph on Sunday night, and caught the 10.30 out of Toronto for Ste. Annes. The return trip was not so boisterous as the journey there, and even Smith did not raise a rough house. We all enjoyed a good time at Guelph, and thoroughly appreciated the hospitality shown us. The O. A. C. residence did not compare very favourably with our own, but the Guelph boys made up in hospitality for what they had not got in accommodation.

Q. McL. '15

---

## An Industrious Section of Bees.

---

In the hive of Macdonald there is a  
Section of "Bees,"  
The instructors of youthful Canada,  
these,  
Industriously gathering from manifold  
books  
The nectar of knowledge, stored away  
in the nooks  
Of dusky brown volumes. Would you  
know these?  
You must meet them, I mean the Bees,  
if you please.  
Elizabeth A. is an overworked Bee.  
Poor girl! She's the head of the list, don't  
you see;  
If there are errands to do, no matter how  
humble,  
Elizabeth does them without even a  
grumble.  
Winnie B., as she flits through the mazes  
of knowledge,  
Is known by her fun throughout the  
whole college;  
So her feats with the "bat," not once  
in a while,

For we know Winnie's winning with her  
sweet winning smile.  
Margaret B. hovers 'mid foxglove and  
heather  
In search of ambrosia, no matter what  
weather;  
"Peggy" we call her, and often the air  
Resounds with sweet music of Scotland  
so fair.  
Gladys B. is so busy that oft at late  
hours  
Besprinkled with dew in many lone  
bowers,  
She explores the crannies of geometry  
and Latin,  
Then, tired of playing spook, folds her  
wings of pale satin.  
C. Brennaud has contrived a logical  
plan  
Of computing her sweets as no one else  
can;  
No methods confuse her,—a box of  
small blocks  
Is all that she needs as she flits o'er the  
rocks.



Alice B., persevering, is learning an art,  
 "Un-bee-like," yet playing a prominent  
 part

In stemming the current where waters  
 are wide,

Since Bees sometimes happen to fall  
 'neath the tide.

Miriam B., not younger nor older,  
 Has abandoned the deep since the waters  
 are colder;

She skims o'er the surface of science and  
 art,—

She's a wonder! They present no diffi-  
 cult part.

E. Cairns, O brighten our drowsy-like  
 hum!

With sparklets of music, like as from thee  
 come;

Chase sadness afar, like the lyre of  
 Apollo,

And joy and contentment will certainly  
 follow.

Florence G. C., with those dreamy grey  
 eyes

Seems like a princess in Bee-like disguise,  
 Who knows as she sips the ambrosial dew  
 What realms of the fairies she may visit  
 anew.

M. Cameron is careful that her wings are  
 kept neat,

For this purpose "Pears' Soap" can  
 never be beat.

Do not get in her way or hide under her  
 bed,

For a cake of this brand might damage  
 your head.

B. Clarke is a Bee by nature and name,  
 Ex-president she in the annals of fame.  
 She carried our burdens and enlightened  
 our days

For more than three months in the sun's  
 heated rays.

Mary C. flutters by with the grace of a  
 king;

Your senses are dead if her smile cannot  
 bring

Your thoughts from the shadows. Her  
 soul

Higher would reach to a loftier goal.

Bertha E., whose locks are of raven-like  
 hue,—

Black Midnight may jealously gaze on  
 those few

Who possess thine adornment! But for  
 a Bee

Beauty is nothing, we're too busy you see.  
 J. Forbes hails from the town of Lachute,  
 Where the wits are supposed to firmly  
 take root.

She gathers her honey 'mongst the deep  
 dewy grass

Of Natural Science. She's a bright,  
 clever lass.

Jean number one disports a long line  
 Of trophies, and triumphs, and medals  
 so fine.

In Dunham her conduct was without a  
 flaw,—

Who'd have thought it. The Bees buzz,  
 "Ha! Ha!"

Ella Johnston, with form and figure  
 "petite,"

Is the jealous regarnder of a kingdom of  
 sweet.

If you visit her "cell" when there is  
 fudge in the air,—

"Disappointed," you say,—no, not in  
 that fare.

Violet J. Alas! What words can explain  
 Thy genial face like sun after rain.

O, flower of the earth, whom all men  
 adore,

Flutter down and remain, let thy jour-  
 nies be o'er.

L. Laurin is watched with most envious  
 looks

As she glides through "*le francais*" like  
 yon distant rooks;

She demurs at no plans nor methods  
 direct,

But softens her words with Parisian  
 effect.

Bessie M., while some are plying the pen,  
 Is rolling the "ball" in yon grassy glen;  
 She might lose most anything critics  
 have said,

But whatever she loses she still has her  
 head

Katherine M., with a cute little nose,  
 With locks that are auburn and cheeks  
     like the rose,  
 Flits by through the mists that cover the  
     earth,  
 Driving off the dark clouds with her  
     frolicsome mirth.  
 Lizzie M. possesses innumerable charms,  
 Her scholars receive her with wide open  
     arms.  
 A Bee that is meek and modest, but yet  
 I'm afraid she will never be called suffra-  
     gette.  
 Jean Nesbit, I call on the muses for aid  
 To publish thy fame o'er mountain and  
     glade.  
 Was basket ball mentioned? Of course  
     you all know  
 If Jean has the ball, in the basket 'twill  
     go.  
 Marjorie Palmer is youthful Activity's  
     child,  
 With a habit of rushing yet a temper so  
     mild.  
 Her fame in the Gym. is scattered afar,  
 She might walk on her head without  
     feeling a jar.  
 Hilda R., with a voice like silvery bells,  
 Undoubtedly blushes as she waxes her  
     cells.  
 The honey she stores, most abundant  
     will be,  
 For she's often seen wandering o'er  
     meadow and lea.  
 Sarah R., well known, a mathematical  
     feature,  
 Quite harmless is she, an industrious  
     creature.  
 When you wish to make clear the difficult  
     page,  
 We advise all the hive to consult with  
     this sage.  
 O. Slack, noble queen of our illustrious  
     section,  
 We tender thee now our sincerest sub-  
     jection.  
 Thy word is law, thy wish our desire,  
 To thy lofty attainments we humbly  
     aspire.

R. Smilovitz, a lover of much open air,  
 Is oft wandering about the meadowland  
     fair.  
 When buried with nature, what need to  
     explain  
 Why the hour of the next lecture dis-  
     appears from her brain.  
 Pearl M. T., the less said about her the  
     better;  
 Regulations and rules continually fret  
     her.  
 With a head full of fancies and a limited  
     brain,  
 Her knowledge of music would give you  
     a pain.  
 S. Wiggins, proud owner of the famed  
     cabbage patch  
 Where often the chickens most innocent  
     scratch,  
 The vegetables are books, the literature  
     honey,  
 The owner thereof exceedingly funny.  
 L. Wilson, you tower above in disdain;  
 You are nearer the skies than we are, 'tis  
     plain;  
 But equilibrium, unstable and rarefied  
     air  
 Might bring you to earth, if you do not  
     take care.  
 O, Pansy, do whisper thy thoughts unto  
     me;  
 From all other flowers unto thee would I  
     flee.  
 O, tell me thy fancies, thy secrets I'll  
     keep.  
 When earth's life is over, O, hush me to  
     sleep.  
 The list is complete. I lay down my pen.  
 The Bees will have swarmed, 'ere I  
     raise it again.  
 From the river's lone bank, come un-  
     dignified groans;  
 O, be not alarmed, 'tis the voice of the  
     drones  
 Whom we do not admit to this illus-  
     trious section,  
 That model of industry and seeming  
     perfection.

P.M.T.



## Faculty Items.



THE appointment of Mr. G. H. Cutler to the Professorship of Cereal Husbandry at Saskatoon chronicles a distinct loss to Macdonald College. Mr. Cutler grew up with the Cereal Department during the summers of 1907 and 1908, and on graduating from the O. A. C., Guelph, in 1909, was made Assistant to Prof. Klinck. His successful work in conducting the field experiments and in the class room earned recognition in 1911, when he was appointed lecturer with special charge of work in selection and hybridizing. He has done credit to the College on the Better Farming Special through Quebec and New Brunswick, and in conducting judging classes in the latter province. Last summer he visited Western Experiment Stations and attended the Graduate School at East Lansing, Michigan. This winter he made a reputation in the Quebec Short Courses. Among the students Mr. Cutler will be missed for his genial interest in their work and activities. He and Mrs. Cutler take with them to the new university of Saskatchewan the very best wishes of both staff and students.

G. Le L., '13



succeeded in maintaining a keen interest in outdoor recreation, in which snowshoeing, tobogganing, skating and sleigh-driving have each contributed a part. Refreshments, served at the homes of members, have given added opportunity for social intercourse and have brought to a satisfactory close many an enjoyable outing.

The third meeting of the Macdonald College Club for the academic year was held on the evening of February sixth. Rev. Dr. Symonds, Rector of Christ Church Cathedral, Montreal, delivered an address on "Anthony Trollope." Dr. Symonds' illuminating interpretation of Trollope and his work left much more than the memory of a pleasant evening in the minds of his audience. Miss Symonds, by rendering several solos, contributed much to the enjoyment of the evening's programme.

The March meeting took the form of a banquet, at which Dr. C. C. James, of Ottawa, as the guest of the Club, delivered an address on "The Cost of Living." Dr. James' intimate knowledge of economic, social and industrial conditions enabled him to present his subject in an unusually attractive and rememberable form. Music was furnished by Mr. Dumbrill, soloist, and by Silverstone's orchestra, of Montreal. Covers were laid for over sixty members. The details of the banquet were arranged and executed by the Senior Class in Household Science, to whom great credit is due for the attractiveness of the tables and the excellence of the service.

During the present year there has been a growing feeling among the junior members of the staff that they would appreciate an opportunity of familiarizing

Insufficient snowfall for good tramping has seriously interfered with the carrying out of the weekly programmes planned by the Snowshoe Club. An energetic Executive, enthusiastically supported by the membership, has, however,

themselves with the scientific aspects of research work being conducted in the different departments of the College. This conviction assumed definite form early in January, when a series of lectures, under the auspices of the Bachelors' Club, was arranged. Thus far the course has proved an unqualified success. "Some Problems in Heredity" were discussed by Prof. Lochhead at the opening meeting. Dr. Lynde spoke on

"Recent Advances in Soil Physics" at the February meeting, and Prof. Barton dealt with "Heredity in Animal Breeding" at the third meeting of the Club. Other meetings arranged for are: "Practical Results in Bacteriological Research," by Dr. Harrison; "Heredity in Plant Breeding," by Prof. Klinck, and "Our Present Educational Needs," by Dr. Sinclair.

L.S.K.

---

## NATURE'S SINCERITY.

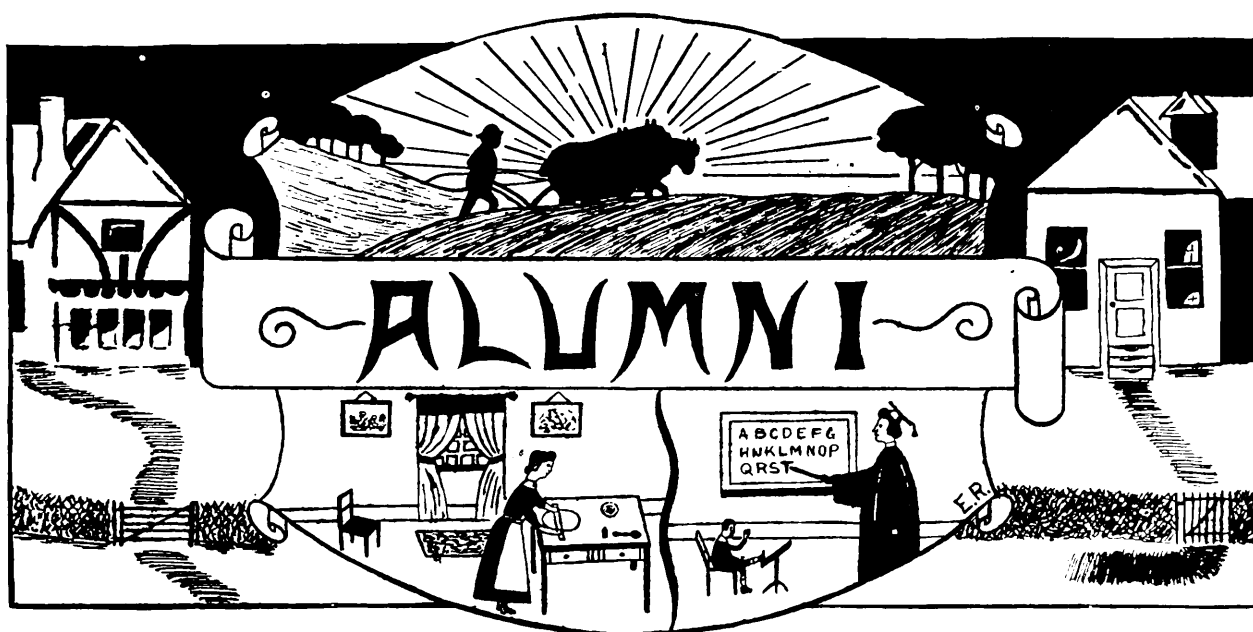
---

Not by fine straining above our natural  
powers,  
Or standing tiptoe over greater heads,  
Do we beget that greatness nature weds  
To her sure actions and her patient hours.  
Nor yet by building arrogant Babel  
towers,  
And aping genius, do we spin those  
threads  
Of grave existence, which the world  
besteads  
When fortune fails and life's horizon  
lowers.

Nor thus doth Nature tread her patient  
rounds  
In gloom of darkness or in wine of  
light,  
Flaming the wheel of her slow fixed  
bounds.  
Revivifying day in womb of night:  
Plodding her dream in mists of might-  
iest powers,  
Working her miracles in her natural  
hours.

—*Wilfrid Campbell.*





R. E. HUSK, MISS PORTER, MISS ANDREWS, EDITORS.

#### AGRICULTURE.

J. Lawrence Van Vliet, '14, is farming at Lacolle, Que.

Baker Brothers, of Class '14, are at their home in Fitch Bay, Que.

C. de Roo Van Aldereverelt, '14, is in the employ of the C.P.R. in Montreal.

Stanley Boyle, '13, works for the Royal Bank of Canada; his headquarters are Edmonton, Alta.

J. E. McOuat, '13, is teaching in Lachute Academy. We hope to have him back with us next year.

C. O. Edwards, '15, is farming at Coaticook, Que. We understand that he intends to cease leading a bachelor's life in the near future.

A. E. Matthews, '14, draws a salary from the G.T.R. His field of operations is limited to Montreal, excepting occasionally on week-ends.

E. D. Craig, '14, when last heard from, was on his way to Boston in the interests

of the Poultry and Bee Business, also probably to do a little "fussing" on the side.

Among our alumni who attended the "Masquerade Ball" were R. J. Westgate, '14; Andrew A. Allan, '15; C. de Roo Van Aldereverelt, '14, and A. E. Matthews, '14.

R. F. Williams, '14, is in "Quebec," Port Maria, Jamaica, acting as busha (or bookkeeper) on a large banana plantation. Incidentally he is task master of a bunch of coolies.

We are very much pleased to announce the marriage of S. N. Oughtred and Miss Gretta Freeze. Oughtred is the first member of Class '14 to marry. The best wishes of his classmates are extended to him.

#### SCHOOL FOR TEACHERS.

Miss Beatrice Goudie is teaching at Kinnear's Mills, Que.

Miss Marion Loney is teaching in Wakefield, Que.

Miss Anna Boisvert, '12, is teaching at Greenlay, Que.

Miss Gretchen Bailey is teaching at Buckingham, Que.

Miss Edith Parker, Class '12, is teaching at Hull, Que.

Miss Ruth Vipond is teaching in Lansdowne School, Montreal.

Miss Lola Radley is teaching in Fairmount School, Montreal.

Miss Ethel Cooke, Elem. '12, is teaching at Point Fortune, Que.

Miss Dorothy Hatton is teaching in Edward VII. School, Montreal.

Miss Irene Marceau, Class '07, is teaching in Lachine Academy.

Miss Jean Hawthorne is teaching in King School, Westmount, Que.

Miss M. Ida Morrison, '12, is teaching in a rural school at Weir, Que.

Miss Catherine Lanskail, '11, is teaching in King School, Westmount, Que.

Miss Alice M. Brownrigg, '12, is teaching in the Point Aux Trembles Institute.

Miss Barbara Caldwell, '10, and Della Neil, '10, are teaching in the Royal Arthur School, Montreal.

Miss Kathleen Wilkinson and Miss Hazel Jones, both of Class '11, are teaching in Earl Grey School.

Miss Mabel Pyke, a graduate of Class '11, and Miss Hope Sorley, '12, are teaching in Mount Royal School, Montreal.

Class '11 is well represented at Alexandra School. Four of its number are teaching there this year; Miss Dorothy Petts, Miss Mildred Russell, Miss Edith Dettmers, and Miss Jennie Caldwell.

#### AGRICULTURAL ALUMNI ASSOCIATION NOTES.

Mr. H. B. Duroste has been appointed as expert in drainage and fertilizers for the Province of New Brunswick.

Mr. L. V. Parent starts work shortly in the interests of the German Potash Syndicate, with the Province of Quebec as his field of activity.

Among the Agricultural Alumni who graced the Masquerade with their presence were Messrs. Savage, Baird, Campbell, Lods, Parent, Raymond, Newton and Robertson.

Mr. R. Newton, who since graduation has been filling the position of college representative in Pontiac County, has accepted a position as Assistant to Dr. Saunders, the Dominion Cerealists, and took up his new duties at Ottawa on March 1st.

Mr. E. A. Lods, who up to the present time has been engaged in investigation and educational work in Quebec, in the interests of the German Potash Syndicate, of Toronto, is leaving shortly to take up other work for the same Company.



## Macdonald College Agricultural Alumni Association.

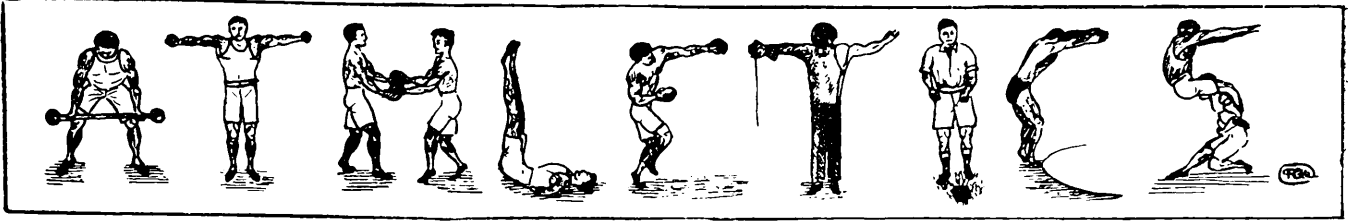
### ADDRESSES OF GRADUATES.

#### CLASS '11 IN AGRICULTURE.

Brittain, W. H., Department of Agriculture, Vernon, B.C.  
 Buck, F. E., Central Experimental Farm, Ottawa, Ont.  
 Elwell, R. W. D., Edmonton, Alta.  
 Gorham, R. P., Department of Agriculture, Fredericton, N.B.  
 Grindley, F. H., Fruit Division, Department of Agriculture, Ottawa, Ont.  
 Grisdale, F. S., c/o Nor'west Farmer, Winnipeg, Man.  
 Innes, R., c/o Wm. Davies Co., Toronto, Ont.  
 Reid, W. J., Department of Agriculture, Charlottetown, P.E.I.  
 Savage, A., Veterinary College, Cornell University, Ithaca, N.Y.  
 Spencer, C. M., Victoria Avenue, Wanganui, New Zealand.  
 Straight, E. M., 507 Cottage St., South Portland, Maine.  
 Summerby, R., Macdonald College, Que.  
 Sweet, C., c/o Seed Branch, Sherbrooke, Que.  
 Williams, C. M., Department of Agriculture, Charlottetown, P.E.I.  
 Wood, G. W., Huntingdon, Que.

#### CLASS '12 IN AGRICULTURE.

Baird, W. W., Ministers' Island, St. Andrews, N. B.  
 Brown, F. S., Central Experimental Farm, Ottawa, Ont.  
 Campbell, A. A., Lennoxville, Que.  
 Davis, M. B., Bridgetown, N. S.  
 Dreher, W. C., Central Experimental Farm, Ottawa, Ont.  
 Duroste, H. B., Department of Agriculture, Fredericton, N. B.  
 Fiske, K. M., c/o Conservation Commission, 14 Metcalfe St., Ottawa.  
 Fiske, S. M., Florenceville, N.B.  
 Flewelling, D. B., Department of Agriculture, Fredericton, N.B.  
 Kennedy, R. S., Lacombe, Alta.  
 Lods, E. A., c/o German Potash Syndicate, Toronto, Ont.  
 Macfarlane, J. R. N., 611 Sydenham Ave., Westmount, Que.  
 Ness, A. R., Macdonald College, Que.  
 Newton, R., Central Experimental Farm, Ottawa, Ont.  
 Parent, L. V., care of "German Potash Syndicate," Toronto.  
 Raymond, L. C., Farnham, Que.  
 Rhoades, E., Macdonald College, Que.  
 Robertson, J. G., Davidson, Sask.  
 Robinson, J. M., Kentville, N. S.  
 Simard, J. A., Seed Branch Dept. of Agriculture, Ottawa, Ont.



G. W. MUIR, EDITOR.



ONCE again we find the winter term fast drawing to a close and for some of us, at least, our sojourn at Macdonald College. I feel safe in saying that those of us who are going out from this institution for the last time will always look back on their college days as the most pleasant and profitable in their lives. While this feeling has been brought about in a large measure, by our studies and associations with the Faculty and our fellow-students, not a little of it is due to the influence of the student organizations conducted at the college, chief amongst which, from the boys' point of view, is the Athletic Association. The popularity of the association needs no more worthy testimony than the fact that its membership roll includes practically all the students in residence. It aims to encourage athletic sports and develop a clean healthy rivalry, to promote physical culture, to maintain an amateur standing, and to provide rational amusement and recreation for its members. That these objects have been realized during the term just over is, I think, quite evident from the results of our annual Field Day, by the keen interest taken in our Inter-class games, and by the success of our teams in outside competitions.

Our annual athletic meet with the boys of Guelph, an account of which will be found elsewhere in this issue, did not prove quite as successful for the Macdonald teams as it has on

former occasions. This may be attributed to a number of reasons, chief amongst which was the fact that they were "up against it" good and hard, and not the least of them was, that they were not on their own floor. However, when we look back over the records and note that we have won five events to their six, and have only about one quarter of the men to pick our teams from that they have, we have quite good reason to be proud of our representatives, and, moreover, feel confident that another meet on the home floor will about square things up.

#### BASKET BALL.

The basket ball players have had a busy season this year, the games starting early in the fall and being kept up continually to the present time. The entering of this team into the Intermediate Y.M.C.A. Basket Ball League made three trips necessary, one being to Sherbrooke and the others to Montreal. The game in Sherbrooke was rather of the "rough and ready" sort on the part of the Sherbrooke aggregation and the score went considerably against the Macdonald team. While in Sherbrooke they took the opportunity of going up to play the return game which they had promised Stanstead College early in the season. Here a much better class of basket ball was played and it was anybody's game up to near the finish. However, the Stanstead team had improved very



much since they played at Macdonald, and this, together with the fact that our boys had played a strenuous game the night before, accounted for the turning of the tables, the final score being 38-20 in favor of Stanstead.

The first game in Montreal was against the North Branch Y.M.C.A. The fact that their floor was very small proved a decided disadvantage to our

stride right at the start and held the hitherto unbeaten McGill team down to a score of 17-8 for the first half. In the second half the McGill team rallied slightly, but Walker's sure shooting and the snappy work of the defense kept the score 32-25 for Macdonald.

Two other games of the League were played on the home floor, the first being with McGill, in which they won



*First Baseball Team.*

team and before they had become familiar with their surroundings the North Branch had run up quite a score. The second game played in Montreal was against McGill, played on the North Branch floor. In this case both teams were unfamiliar with the floor, so that an interesting game was expected, and no one was disappointed in that regard. Our team found their

by a narrow margin, and the second with North Branch, which was also won by the visitors. The score was close in this case also, and might have appeared better for our team but for the fact that they attended the Masquerade Ball the night before. The following is the personnel of the College team: Walker, captain; Schafheitlin, Hodge, Evans, Wilcox, and Hyndman.



| League standing       | Played | Lost | Won |
|-----------------------|--------|------|-----|
| McGill                | 6      | 1    | 5   |
| North Branch Y.M.C.A. | 6      | 2    | 4   |
| Macdonald             | 6      | 4    | 2   |
| Sherbrooke            | 6      | 5    | 1   |

**BASEBALL.**

Mention should be made here of the excellent manner in which Manager Ness and Capt. Walker handled the team, and also of the good work done by the second team in giving the firsts

Interest has not been as great in connection with baseball as it has been with basket ball, owing to the fact that it is hard to get teams willing to play with us. Nevertheless, a few games were played with outside teams, in all but one of which our team came out successful, the exception being the O.A.C. game, an account of which will be found elsewhere.



*Class '15 Team, Winner of the Robertson Shield for Indoor Games.*

so much valuable practice. The seconds also found time to play a couple of games with McGill Juniors, in which they came off second best, the score in the first being 13-23, and that of the final game 27-29, in favor of McGill. The following made the team: Smith, Muir, Durling, Presley, Oswald and Fraser.

The first game to be played was with the Victoria Rifles of Montreal. It was rather one sided, the Vics being unused to a floor as small as ours, and the lightning balls from our pitcher did not seem to help them feel at home. At the conclusion of the ninth innings the score was 30-3 in our favor.

Later in the season we met a team



that were pleased to call themselves "The Idle Senators of Ottawa." They represented the Department of Agriculture, and naturally thought they would be right at home amongst some agricultural students. They were, until they commenced to play baseball; then the score of 29-3 in favor of Macdonald was sufficient in itself to show that they were not in the same class.

On March 15th, the team journeyed to Montreal to play a return game with the boys of the Victoria Rifles. Their floor is large and the bases far apart, so that our boys had some practice in base-running and fielding, but nevertheless they again came off victorious to the tune of 6-3.

Numerous games of more than common interest were played with the Recreation Club, in which the students always came off victorious. These games in all cases proved to be good exhibitions of baseball, and we are indebted to them for much of the practice which stood us in such good stead at other matches.

Capt. Ricker and his men are to be congratulated on the excellent showing they have made. This was in no small measure due to the splendid pitching of Sutton and Evans. The following composed the College team: Sutton, p.; Roy, c.; Ricker, capt. 1.b.; Hodge, s.t.; Middleton, 3 b.; Evans, r.f.; Dash, l.f.; Presley, 3 b.; Walker, c.f.; and Young, u.f.

#### INTER-CLASS GAMES.

A great deal of interest has been taken in these games, especially in the basketball series where we have had a few most exciting games. As predicted earlier in the term, through these columns, the most of the strife was between the Juniors and Sophomores. The latter, however, got the lead by cleaning the boards on baseball.

When they met to play basketball they stood even, each team having won one game, so that the game which followed was naturally rather interesting. It was notable for being nip and tuck from beginning to end, first one team then the other leading, and finally resulting in a tie.

Another interesting and perhaps the best game of the season was that between the Sophs and Freshmen in basket ball. Both teams were out to win and went into the play like young cyclones. They took turns at leading in the scoring but the Sophs finally won out, with a score of 31-25. The Sophomore year is to be congratulated on winning the "Robertson Shield for Indoor Sports", which is a fitting reward for their consistent team work throughout the season. The following is the league standing:

| Baseball   | Won | Lost |
|------------|-----|------|
| Sophomores | 3   | 0    |
| Seniors    | 2   | 1    |
| Freshmen   | 1   | 2    |
| Juniors    | 0   | 3    |

| Basketball | Won | Lost | Draw |
|------------|-----|------|------|
| Juniors    | 2   | 0    | 1    |
| Sophomores | 2   | 0    | 1    |
| Freshmen   | 1   | 2    | 0    |
| Seniors    | 0   | 3    | 0    |

#### HOCKEY.

Hockey enjoyed its usual popularity at Macdonald this season. It has not been made an inter-class game as yet because our time is so much taken up that it would be difficult to find any in which to play off a hockey schedule. In spite of the fact that we have no inter-class hockey, which, I admit, would bring out more players to try for the first team, there has been strong competition for all the positions enabling Manager Clement and Capt. Middleton to choose a strong team.

The first game of the season was played on the 18th of January, against a picked team from Fairmount. The game was fast and inclined to be a little rough throughout, more than one man being put over the boards, but no penalties were handed out. The visitors had a string of victories to their credit and were rather put out when our team held them down at 1-0, that being the final score in our favor.

again succeeded in holding their adversaries scoreless at 2-0.

On March 1st, the morning after the masquerade, they met the McGill Science team and also with defeat, to the tune of 1-0. The game was rather listless on the part of our boys as well as some of the visitors, owing to the previous night's dissipation. The last game of the season took place on the 9th of March, when the College team



*First Hockey Team.*

A return game was played in the Hockey Arena, at Montreal, on the 1st of February. Here again the play was fast and furious, but the rink being much larger gave the opponents the advantage, and the game resulted in a score of 2-1 for the Fairmount team.

No more matches were played until the O. A. C. event, when our boys

played the Faculty. Unusual interest was aroused over the event and numerous were the conjectures as to the result, which was, I think, a surprise to all. The boys thought they saw a chance to pay off some old scores, and rained in the shots in good style, only the excellent work of Mr. Summerby in goal saving them from a worse defeat than 6-0.



The following is a list of the men who made the team :—Fraser, Smith, Young, Middleton (Capt.), Hyndman, Oswald, Evans and Hammond.

COLLEGE RINK.

After a very successful season the College rink closed on March 12th. The latter part of December and the beginning of January being exceptionally mild made the work of getting it started rather difficult, but with constant attention soon the ice was

School as the fair sex also had their turn at this favorite Canadian winter sport. The Faculty also had a hockey team and played a number of games. Notwithstanding the fact that a new change house has been built for the men students, the books show a balance on the right side.

|                    |          |
|--------------------|----------|
| Total assets.....  | \$306.50 |
| “ liabilities..... | 296.45   |
|                    | <hr/>    |
| Balance.....       | \$10.05  |



First Basket Ball Team.

in fine shape. Many enjoyable afternoons and evenings were spent here after a day's work in the class room or laboratory, and doubtless were equally enjoyed by those on both sides of the campus as well as by the Faculty. Every week there was a hockey match and often two or more. These matches were not confined to the Agriculture

On behalf of the students, I wish to take this opportunity of thanking the manager, Mr. Roy, and the secretary, Mr. Taylor, for the generous way in which they have given of their time and energy that we might have a rink of which we are justly proud, and hope they will take this humble appreciation as an acknowledgment of their success.



## Girls' Athletics.

MISS B. REYNOLDS, EDITOR.



FOR the last time this season, we sum up the results of a strenuous athletic year. In the future it will be with a feeling of pleasure that we look back upon the hours spent in the gymnasium as, perhaps, the most enjoyable of the college year, and as the editions of the Magazine of next year appear it will be with great interest that we regard the standards gained by the future Macdonald teams.

We are glad to say that since the beginning of January many more

Science had won by one point. On January 27th the Senior Model and the Elementary teams played the return match. Throughout the game the score swayed first in favor of the Elements then in favor of the Models, but in the end a few baskets brought the score up to 27 for the Elements while that of the Models was only 20. On February 3rd, the Science team were defeated by the conquering Elements who piled up the score to 24-6.

Saturday, February 15th, was one of great preparation for the basket-ball



*Model Teachers vs. Junior Science Hockey Match.*

matches have been played than formerly. On January 13th a rather exciting game of basket-ball took place between the Junior Elementary and Model teams, the score being 17-13 in favor of the Elementaries. Later in the month the Science team for the first time played an exciting game with the losing Model team. The score in the first half was much in favor of the Science, but during the second half the Model score gradually increased, till at "time" the

players, for was not this our first day to play an outside team? Yes, at 3.15 sharp, the two teams appeared on the floor, each determined to do its best. The whistle blew and the ball flew first to one end of the gymnasium then to the other, but as it reached Macdonald end "Snooks," one of our worthy "homes," tossed it into the basket and again and again scored for our girls, while the onlookers cheered incessantly. The game ended in a brilliant victory for



Macdonald, the score being 19-7. The line up for the game was as follows:—

| Fairmount  |           | Macdonald     |   |
|------------|-----------|---------------|---|
| E. Moore   | } Home    | M. Biltcliffe | { |
| K. Yates   |           | H. O'Connor   |   |
| Nl. Mowatt | Centre    | D. Slack      |   |
| L. Woodley | } Wing    | W. Cross      | { |
| L. Radley  |           | A. Moore      |   |
| H. Moore   | } Defence | A. Pratt      | { |
| L. Bampton |           | J. Nesbitt    |   |

afternoon and Saturday morning a lively practice is held under the management of our enthusiastic out-door manager, Miss A. Pratt. It was arranged that a friendly game should be played between the Elementaries and Models. Accordingly, on February 13th, an exciting match took place. Between tumbles and cold hands and cold feet each side succeeded in making a goal, amid the wild cheers of their followers.



*Girls' Basket Ball Team.*

Our success as a team was, for the great part, due to the excellent coaching of Mr. Powter who every Wednesday night coaches many different teams during the hour that he is with us. Much praise is also due to our energetic manager, Miss Amy Moore, whose untiring efforts to urge on basket-ball have not been without reward, as was seen in the game against Fairmount.

Though basket-ball has claimed much of our attention hockey has not been neglected, and every fine Thursday

The score being left a tie, the game was played off a few days later, when the Elementaries were victorious, gaining two goals while their opponents scored none. The Science have been challenged by the Models and hope to provide a very exciting game on March 13th.

Baseball has not been forgotten and it was with intense interest that we watched the first match on March 8th. The baseball girls who, we are sorry to say, are few in number, have had



excellent coaching from Mr. Ness, and wish to take this opportunity of thanking him for it. The game against the "Old Girls" from beginning to end was very exciting—both sides playing well, but in the end the "Old Girls" were defeated by a score of 24-18.

The line up of the teams was as follows:—

| Old Girls                        | Macdonald     |
|----------------------------------|---------------|
| H. Moore . . . Catcher . .       | M. Boyd       |
| E. Simpson . . . Pitcher . .     | R. Tenney     |
| E. Tardiff . . . 1st Base . .    | H. O'Connor   |
| B. Russell . . . 2d Base . .     | M. Biltcliffe |
| E. Moore . . . 3rd Base . .      | P. Le Baron   |
| G. Biltcliffe . . . St. Stop . . | A. Steele     |
| D. Mowatt . . . R. Field . .     | M. Palmer     |
| M. Guilline . . . L. Field . .   | M. Way        |
| D. Petts . . . . . C. Field . .  | M. Buzzel     |

We hope to play more games before the season is over, both with outside teams and amongst ourselves. Just now we are hard at work for the Gymnasium Competition which is to take place on March 18th. The Gymnasium seems a very popular place at all hours of the day, for we all enjoy the work so much that there is a temptation to spend too much time there.

The girls who are leaving the college this year wish the future Macdonald teams every success for the coming years, and hope that they (the present girls) will be able to return during the following years as old girls to play some friendly games of both basketball and baseball.

B.G.R.



*Girls' Baseball Team.*





CHAS. RUSSELL, MISS MACPHERSON, HUMORISTS.

## A COLLEGE ESCAPEDE.

'Tis midnight in the Men's Residence. The lights have just gone out. The Sabbath has just passed, and the special policeman can take up his self-appointed mission to assist the Residence Committee in punishing refractory students who screen themselves behind a confessed lack of knowledge of rules, or worse still, a spirit of *camaraderie*.

But to introduce my story. A Senior, whom we shall call Da-a-vid, having been reported for using the bath during study hour was summoned to—

SCENE I.—*Meeting of Committee.*

Ensued the following examination:

Chairman, announcing charges,—  
“What have you to say for yourself, sir?”

David—“I wasn't aware of any such rule, and what is more I object to a member of your Committee intruding on the pre-e-vacy of my bath. I request, sir, that you reprimand your unmannerly member.”

(Member is seized with a violent fit of coughing.)

Chairman—“We shall deal with your first statement. You have passed those rules half-a-dozen times daily and should have known them long 'ere this.”

David—“I have not noted those rules at all carefully, because I had no intention of breaking them. My time of bathing was certainly unfortunate, but I request that your member be instructed as to manners becoming a gentleman.”

Chairman—“In view of your past good behaviour, I accept your explanation and shall reprimand my Committeeman. You may go, sir.”

SCENE II.—*David's room, weeks later.*

David, concluding above story,—“I put it all over Ben that time, didn't I, McC—k?”

McC—k. “Yes, I thought he'd tumble at my coughing.”

Police (who is David's bosom friend)—  
“You should be ashamed of yourself, David, and don't forget that chickens still come home to roost.”

David—“Ha, ha, ha,—I fooled him!”

SCENE III.—*David's room on the Sabbath midnight.*

Enter police, arrayed in his pyjamas, overcoat and slippers, and tiptoes to the bedside. A smothered smile, a jerk, the bed is upside down, and police rushes to the closet, accompanied by a smothered dam-m-m from underneath the bed.

David frees himself from the wreckage, goes to the door and peers eagerly up and down the corridor—but not a sight or a sound. Locking the door on the inside he returns to the bed, but steps on the sharp corner of a stray castor,—another dam-m-n. He straightens up the wreckage as best he can in the dark and turns in, but not to sleep. Police, in the closet, wonders if the key is in the door, bites his lip, and listens. David rubs himself audibly, now here, now there, and breathes quite short and rapidly. At length he quiets down to slumber and snores to eclipse a Boston terrier. Police advances cautiously from the closet, finds the key, and locking the door on the outside, steals down to the room of the Chairman. It is locked, but next morning he'll find a bunch of keys on his door knob.

SCENE IV.—*Meeting of Committee.*

David—"There's an excavation in the plaster which I refuse to pay for. . . . The culprit must have had a master-key to get my keys from the inside. . . . I suspect McC—k, because he intruded on my pre-e-vacy once before, and now I suspect him of intruding on my repose."

Police, who has been summoned on suspicion, thinks it quite possible that David, in his restless slumbers, might have overbalanced in the bed and dumped himself, but this is proved unlikely by the straying of the keys. He then advances the closet theory and the mystery deepens. Will time ever solve it? Meantime, the plaintiff nurses his bumps, is bosom friend with policeman, and plans to get square with the suspected McC—k.

\* \* \*

Dr. Hamilton—(after an experiment in Chemistry)—"Can you give me the properties of—Oh, Miss Ada St—e!"

Miss St—e.—"Colourless—tasteless—transparent—lighter than air."

A NEW WAY.

A little snow,  
Tramp planned,  
Men invited,  
Prospect grand.

But, alas!  
The weather man  
Melted the snow,  
And away it ran.

Worried girls,  
Much talk,  
Till one suggests,  
"Don't tramp. Walk."

Lovely night,  
Walking down road,  
Many people,  
Merriment showed.

" 'Twas a way,  
A novel way,  
To have a tramp,"  
Says Section A. B. R.

\* \* \*

NO AMATEURS WANTED.

Edith and Flora were spending their vacation in the country.

"Do you know," said Edith, "that young farmer tried to kiss me. He told me he had never kissed any other girl before."

"What did you tell him?" asked Flora.

"Why," replied Edith, "I told him I was no Agricultural Experiment Station."

\* \* \*

Mr. C-ffn—(After many vain attempts to carry on a conversation with Miss M- -hew, beside whom he was sitting).

"Well! It is going to be peace or war between us?"

Miss M- -hew—(sternly) "Chairs."



"Fat ——" was in the apple tree attempting to prune it. Mr. Aikenhead, seeing that he is in difficulties, tells him to take a look at the last tree finished.

"There's no doubt in my mind as to what I am doing, Mr. Aikenhead, but perhaps there is in what you think I'm doing."

\* \* \*

Mr. Hammond—"Where is Gordon to-day, Boving?"

Boving—"I haven't seen him, sir."

Mr. Hammond—"Well, the last time I saw him he was fussing."

The Boy—(to J-nk- -s)—"Do you like music with your meals?"

J-nk- -s—"Yes."

The Boy—"Then keep on talking."

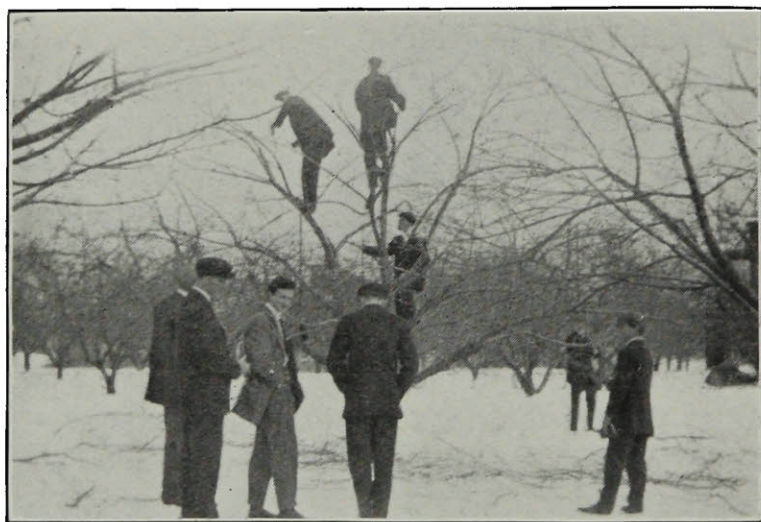
\* \* \*

Junior—(at phone)—"Would you like to go on the Snowshoe tramp on Friday night?"

Teacher—(excitedly)—"Oh! I would be so pleased to go."

Junior—"All right. We'll meet at 4.45."

Teacher—"Yes. Who is speaking, please?"



*This is where it happened.*

Routh—(Bull judging)—"This cow conforms closely to the type desired in the Holstein breed."

Mr. Ness—"Pardon me, Mr. Routh, but this cow happens to be a bull."

\* \* \*

Miss Wy--t appears with a new hair ribbon.

Miss Creaghan—"Ah, Miss Wy- -t, we see that you have two beaux now."

\* \* \*

Mr. Bergie—"Myself, Mr. Graham and all other famous poultrymen recommend this incubator."

\* \* \*

We notice that since the first of March there is lots of male in the postoffice.

Umpire—"Foul."

Freshie—"Where are the feathers?"

Umpire—"They are all picked teams."

\* \* \*

First Year—"Did I make myself plain?"

Fourth Year—"No, you just grew that way."

\* \* \*

Smith—(holding Bill by the hair)—"Now, I've got you, Steve!"

Bill—"It's not the hair I mind, it's the pain behind it."

\* \* \*

Section "A" Girl—(commenting on the debate)—"The affirmative won with the negative a close second."

## WE ARE SEVEN.

MacDougal—(after Y. M. C. A. song service)—“Walker, did you see Cowan after church?”

Walker—“Yes. Did Emberley go home with Miss L- B-r-n?”

Schafheitlin (overhearing)—“No. But Fiske did and Russell is as sore as a boil.”

\* \* \*

## A SCIENCE RECIPE.

To one piece of dark piazza add a little moonlight. Take for granted 2 people pressed in strong arms. One soft hand. Sift lightly 2 ounces of attraction, one of romance, add a large measure of folly and stir in one or two wisps of hair and a floating ruffle. Dissolve 2 doz. glances in a well of silence. Dust in a small quantity of hesitation, 1 oz. of resistance and 2 of yielding. Place the kisses on a flushed cheek or 2 lips, flavor with a slight scream and set aside to cool.

This will succeed in any climate if directions are carefully followed.

\* \* \*

## OH! YOU.

Halliday and Hamilton room together. Hamilton at one end of table with Halliday at the other.

Hamilton (seeing Halliday frantically beckoning to the waitress)—“My wife would like some more meat, please.”

Waitress—(stopping at Miss Q- -gl-y) “Is this the one?”

\* \* \*

## WHY WOMEN DO NOT VOTE.

Miss LeMesurier—“Mr. Boving, who is going to win the debate?”

Mr. Boving—“Well, I think the Seniors have presented their case better than——”

Miss LeMesurier—“Oh! But the others are so much nicer.”

## PRUNES AND PRISMS.

Blondin's wheat crop must have been a bumper, we see him so often going Millward.

At this season it is quite usual to find Foxes by the Rhodesides.

Miss Roy has learned that even kings and presidents cannot afford to neglect their Bills.

The Freshmen are still optimistic. You can even hear the Hyndman re-Joyce.

Frazer is fond of deerhunting. We hear that he contemplates a trip to Buckland.

\* \* \*

Middleton, do you think a big Bill can be offset by a small Fee? Or should we say upset?

Newton and Matthews are very thick now-a-days. Only a Reid divides them.

Richardson! Watch out. You may get Kilburned.

Oh Dick! Come Quigley.

Mr. Gordon informs our correspondent that his favorite book is “Pigs” by Day (and also by Subdued Light).

Ricker is much engrossed in fanning-Mills lately.

We notice that Boving has given up his safety razor (a Guillet).

Creaghan's Father, “Walk—But take a Carson.”

Baily's favorite proverb:

“April showers bring May flowers.”

\* \* \*

McK.—“What first attracted you about Miss B- -s?”

B.—“Oh, I was enslaved by her beautiful hair.”

McK.—“Kind of a rat trap, eh?”

\* \* \*

Miss R- -s.—“Do you know where I can get the loan of a pair of gloves? I lost one of mine yesterday?”

Miss M- -s.—(in a bored tone)—“Go to Helen Fish for them.”



## AFTER YEARS.

When the silver moon comes o'er the  
trees,  
And the light grows dim;  
When you want to cough and can  
only sneeze,  
And the skeeters bite like sin;  
When the hammock rope is busted,  
And your girl ain't there;  
When the piano isn't dusted,  
And life is full of care;  
Then, Agricultural Student,  
I think you'll say with me,  
That the best little place in all this  
world  
Was the M. A. C.

When the schoolroom is heated to  
ninety degrees,  
And the day grows long;  
When there're bells in your head and  
shakes in your knees,  
And all goes wrong;  
When the children dream the time away,  
And all are half asleep;  
When you want to yawn and yawn all  
day,  
And the minutes slowly creep;

Why then, Macdonald teacher,  
I think you'll say with me,  
That the best little place in all this  
world  
Was the M. A. C.

When the heat in your oven goes down  
by degrees,  
And the fire won't light;  
When you've o'erturned the lard pail,  
—are covered with grease—  
And your kitchen's a sight;  
When the bread in the oven simply  
won't bake,  
And the baby howls and yells;  
When you've had no luck and spoiled  
a cake,  
And your tears would fill big wells;  
Then, little Science Maiden,  
I think you'll say with me,  
That the best little place in all this  
world  
Was the M. A. C.

C. K.

\* \* \*

## THAT'S ALL!

Owing to its peculiar seasonableness  
we call the attention of our readers  
to the "END" design. "Nulf 'sed."









J C Halliday  
Room 234



